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SANITARY AND OTHER FEATURES OF THE HUMIDITY OF HEATED AIR.

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The disturbing influence of atmospheric vicissitudes on the system is, both directly and indirectly, a potent cause of disease and death. Direct and clearly manifest effects of it are observable in the marked prevalence of inflammatory affections of the chest, in winter, and of diarrhœal affections in summer; and those of gradual onset or of an indirect character, are doubtless quite as important, though not very obvious. In the so-called temperate zones of the earth, it would seem that multitudes are almost inevitably doomed to succumb to "stress of weather," to use an expressive nautical phrase. It is, perhaps, impossible to entirely prevent harmful perturbations of the system of such origin. Due regulation of the clothing, and mode of life in general, is, of course, powerful for good; but all efforts to withstand and to shun external conditions of a nature prejudicial to health are far from being perfectly successful.

Of the various expedients resorted to for the purpose of circumventing special harmful atmospheric vicissitudes, or conditions, it is more than probable that some are not free from harm in themselves. Certain changes produced in air artificially heated is one of these, and to it the remarks which succeed will be devoted.

Heated air, in its various aspects, is so extensive a subject, that I will not attempt to do more at present, than speak of some features of its humidity or degree of moistness, a matter to which little study is given, although it assuredly merits the attention, not only of physicians, but of people in general.

The hygrometric condition of the air and its variations, even apart from their effects on the economy, are indeed somewhat abstruse matters, but not to such a degree as is generally supposed, certainly not so markedly so as to be beyond the comprehension of any one almost, who really wishes to understand them. A careful perusal of the remarks I shall make below will, I believe, enable one to gain an insight into most of the chief features of them, besides their bearings on health, which are of interest to the physician and sanitarian.

It is hardly necessary to say that the atmosphere consists essentially of nitrogen, oxygen, carbonic acid and aqueous vapor. The proportion of each of the first three ingredients or constituents of it is nearly always and everywhere the same—a given amount of it contains about 79 parts of nitrogen, nearly 21 of oxygen, and about .04 part, or 4 parts in 10,000 of carbonic acid; but the proportion of the last, in a given amount of it, varies very much. The possible amount of aqueous vapor present depends on the temperature. When the temperature is high, much more may be present than when it is low. Thus a cubic foot of air, at a temperature of 90°, may contain over fifteen times as much as the same bulk at a temperature of 5°, an enormous difference.

In this connection it is expedient and well, I think, to give the following useful table, showing

the possible amount of vapor present in a cubic foot of air at different temperatures:—

Temp.	grs. of vapor to c. f.	Temp.	grs. of vapor to c. f.
0	.78	45°	3.64
5°	.93	50°	4.28
10°	1.11	55°	5.02
15°	1.32	60°	5.87
20°	1.58	65°	6.87
25°	1.87	70°	8.00
30°	2.21	75°	9.31
32°	2.37	80°	10.81
35°	2.62	85°	12.53
40°	3.09	90°	14.50

When a given amount of air of a certain temperature contains as much moisture as can possibly be present without precipitation, it is said to be saturated. Now, taking the amount of moisture present when the air is saturated, to be represented by 100, the degree of saturation, or, in other words, the relative humidity may be expressed in parts of 100. Thus, as a cubic foot of air at 70°, when saturated, contains 8 grs., if there are only 4 grs. present in it, the degree of saturation, or relative humidity, is indicated by 50. Then, of course, if the relative humidity of air, at a temperature of 70°, is, say 75, it contains 6 grs. of moisture to the cubic foot. Evidently, if the temperature and relative humidity are given, it is easy to calculate the precise amount of moisture present in a cubic foot of air, when a table of the possible amount present at different temperatures is at hand; all that one has to do to determine it, is to multiply p, the possible amount present, by r, the relative humidity, and divide the product by 100, or the amount of moisture present in a cubic foot is $= \frac{p \times r}{100}$.

I need not explain at length how to determine the relative humidity. It is sufficient to say that to do so, it is necessary to have a hygrome ter, say Mason's (the one in general use), an instrument by which the difference between the actual temperature and the temperature at which the air should be so as to be saturated with the moisture present in it, or at the dewpoint, is indicated. This difference being known, the relative humidity is found by referring to a table, the nature of which I need not explain. The hygrometer consists essentially of two thermometers placed on a rest at a distance of two inches or so from each other, the bulb of one of which is covered thinly with a cotton wick, which is kept moist through imbibing water from a cup or other vessel placed near by. Being neither expensive nor hard to operate, it should be in more general use than it is. The absence of it, even in hospitals, schools and such institutions, indicates how extremely few are alive to the value of it.

To any one who has carefully read what precedes, it is evident that if air is artificially heated, the relative humidity of it must necessarily be altered. Thus, if the air of a room the relative humidity of which is 50 be raised from a temperature of 30° to 70° the relative humidity will then be 14.8. Here the problem runs thus: If air of a temperature of 70° contains 1.185 grains to the cubic foot, what is its relative humidity? The answer is obtained by dividing p, the possible amount of moisture present at 70° (8 grs.) by a, the actual amount present (1.185 grs.) and 100 by the quotient or the relative humidity is $= \frac{100}{p \div a}$.

Now, if in a room we have 1000 cubic feet of air, the temperature of which is 25° and the relative humidity 50°, and we raise the temperature to 70°, how much moisture must be added in order to have the humidity still at 50? The answer is 3.065 grains to the cubic foot, or 3065 grains in all, which is 6.73 fluidounces, the weight of an ounce of water being taken at 455 grains. Then, of course, if the 1000 feet of air were changed hourly, it would be necessary to have 161.5 ounces or about five quarts of water evaporated every twenty-four hours.

Again, if in a house we have 20,000 cubic feet of air, the temperature of which is 25° and the relative humidity 50, and we raise the temperature to 70°, how much moisture must be added in order to have the relative humidity still at 50? The answer is 61,300 grains or 134.7 fluidounces, which is somewhat over four quarts. Then, of course, if the 20,000 feet of air were replaced hourly, it would be necessary to have 3232.8 ounces or about 25 gallons of water evaporated daily.

If the temperature be as low as 10°, and of a humidity of 25, the air of a house of a capacity of 30,000 cubic feet, heated to 75°, and rendered of a humidity of 60, would call for the evaporation of 5.3 grs. to the cubic foot, or nearly 11 quarts in all. Then, of course, if the 30,000 feet be replaced hourly, the evaporation of 264 quarts or 66 gallons would be needed every 24 hours.

Evidently it would require a large pan and a high heat beneath it to evaporate sufficient water to properly hydrate the air of a large house the temperature of the air of which is kept at 75° on a frosty day. The little pan which may or may not be found in connection with a heater

would be of little value; it would require over a hundred such to serve the purpose.

In order to gain even a moderately correct idea of the amount of moisture which must be added to the heated air of a house so as to keep it at a reasonable degree of humidity, it is necessary, among other things, to form an estimate of the amount of air which should pass through it during a given length of time.

Now, to arrive at even a moderately correct conclusion as to the amount of air which should pass through a house hourly, or daily, it is necessary to be aware of the number of inmates, and also of any other source of contamination of the air, such as the burning of gas, which are present.

Although there is sufficient reason for holding that a person should have 3000 cubic feet of fresh air per hour, the amount one contaminates through the breath and otherwise, to a really injurious degree, may be set down at 1000 cubic feet per hour. The amount of carbonic acid given off by the lungs alone of an adult being about 5 per cent. of the 15 cubic feet consumed by such a one, on the average hourly, or $\frac{3}{4}$ of a foot per hour, would consequently be sufficient to cause nearly 5 parts to the 10,000 of it to be present after a person had been in an air-tight room containing 1000 cubic feet for an hour—a proportion of it, whether of itself or of the organic matter which accompanies it, which would cause lassitude and other undesirable effects. Dr. Parkes regards more than 6 parts in 10,000 as decidedly too much.

If two persons are in a room of a capacity of 1000 feet, it follows from what has just been said that all the air within it should be replaced every half hour; and if four are present it should be replaced every quarter of an hour—a thing which can hardly be done without causing injurious drafts. With the contamination caused by the skin as well as the lungs taken into account this estimate is low.

The air of a room may, under favorable conditions, be changed three times per hour, but it is unusual, I believe, for it, in one of a capacity of say 3000 feet, one 17.33 feet in length, the same in breadth and 10 feet in height, to be replaced even hourly; and rarely is any great effort made to ventilate any room to meet the requirements of the number of persons present—a very serious sanitary dereliction.

Taking a heated room of a capacity of 2000 cubic feet, the air of which is replaced about hourly, and in which there are four persons, let us consider some of the hygrometric features of it in detail. Now, if we take the temperature of the external air to be 35° and the humidity 70—the average temperature and humidity from the first of December to the end of March, at Philadelphia—and the temperature of the air within to be 70°, it would be necessary to have a pint of water evaporated hourly in order to keep the humidity at about 65—a fair degree of humidity when the temperature is 70°. Now, as the amount of moisture exhaled from the four persons present may be placed at four ounces per hour—a low estimate undoubtedly, when the air around is dry and warm—the amount to be supplied by artificial evaporation is reduced to three quarters of a pint hourly. If no moisture be evaporated artificially the degree of humidity would be nearly 34. If the air without be of a temperature of 35° and of a humidity of 70, when heated to 60°, the humidity would be about 27. If an addition of 4 ounces be made to every 2000 feet, the humidity would be about 40. With a temperature of 70° and a humidity of 34 it would be necessary to evaporate about 11 ounces of water in order to bring the humidity of 2000 feet of air up to 65; and with the temperature at 60° and the humidity at 40 it would be necessary to evaporate about half a pint in order to bring the humidity to 65.

It appears, then, that even if a room of a capacity of 2000 feet contains four persons and has a complete change of air only once every hour, if the temperature is kept at 65° and the humidity at 70, it is necessary to evaporate a large amount of water in order to keep the humidity at 65.

A fact worth noting here is, that sometimes, in a badly ventilated room in which there are many persons, the degree of humidity may be high even if no moisture be added artificially. Thus, in a room the air of which is changed once every hour, and in which there is a person to every 200 cubic feet of its capacity—an allowance which is not reached in some schools and other institutions—the air without being at a temperature of 50° and of a humidity of 70, and the air within at a temperature of 65°, its humidity will be about 83.

From what has just been said, it follows that the amount of moisture which should be added to the air of a heated room when unoccupied, to have it at a proper degree of humidity, may be uncalled for when a number of persons have been present for awhile. It is wrong, then, to go on supplying the same amount of moisture to the air of a room regardless of the number of its occupants.

In this connection it is proper to state that the moisture which is supplied artificially to the air of a house should, as a rule, be supplied to each room according to its requirements. This should be done through an evaporator, or some special arrangement by which evaporation can be facilitated. Supplying the moisture to a whole house through an evaporating pan placed in a heater, is a very unsatisfactory plan, for, unless the temperature is at the same degree in each department, the degree of humidity varies. Thus, if a sufficient amount of water be evaporated in this way to keep the air of a room in which the temperature is 70° at a humidity of 65, the air of a room in which the temperature is 60° would be far too damp, it would be almost saturated.

In a room the air of which is kept warm through a heater or other ordinary means, it usually happens that the temperature is very unequal in different parts of it, and the same must be at least equally true of the humidity. Thus, while the temperature close to the register is over 100°, it may be under 60° at points distant from it, and at least an equally marked difference of humidity is inevitable. The due regulation of the humidity of such a room is an absolute impossibility. And are not the majority of rooms such? It is unfortunate that any room should be such, but more especially a large one, in which many assemble, as a schoolroom.

The difference in the temperature, as well as the hygrometric condition of different parts of a room heated artificially, depends greatly on the character of the walls, and the facil ity with which currents of air may both escape and enter, but greatly also on the temperature of the air at the source of heat. When the temperature of a large room is kept up through the entrance of heated air, there should be more than one place for it to enter; there should be many; and, in case of any room, it is wise to have a large volume of air of a moderate temperature to enter, rather than a little only at a very high temperature.

Now, as a matter of fact, one feels warmer in a moderately moist than in a very dry air, of any temperature. Very dry air, especially when warm, tends greatly to cool the body, by inducing speedy evaporation–a chilling process. Air of a temperature of 60° and of a humidity of 80 feels warmer than air of a temperature of 70° and of a humidity of 40. From this, and the fact that when a room is occupied for a little while the relative humidity is increased, it follows that the temperature should be reduced somewhat after occupancy.

The statement made above, that air of a temperature of 60° and of a humidity of 80 feels warmer than air at a temperature of 70° and of a humidity of 40 is one which I desire to emphasize. The truth of it admits, of course, of experimental demonstration; but it can be equally as well shown, mathematically. This I will do, taking into consideration only the impression produced on the system by each quality of air through respiration, what is true of it being more emphatically true of that produced through the skin.

Now, it is necessary to premise that the specific heat of air is .237, that a cubic foot of air of a temperature of 60° weighs 536 grs., and one of air at 70° weighs 526 grs., that there are 7000 grs. in a pound. that 966 heat units (the unit of heat is the amount required to raise one pound of water one degree) are necessary to evaporate a pound of water, and that exhaled air may be taken as of a temperature of 90°, and of a humidity of 100. In passing through the lungs. the amount of heat necessary to bring a cubic foot of air at a temperature of 60° and of a humidity of 80 up to 90° and to the point of saturation, is .544 heat unit, or $30° \times \frac{536}{7000} \times .237$; and as the evaporation of the 10.234 grs. of moisture necessary to produce the equalization in moistness calls for 1.412 heat units, the whole amount of heat abstracted from the system in the process is 1.956 heat units. Again, in passing through the lungs, the amount of heat necessary to bring a cubic foot of air at a temperature of 70° and of a humidity of 40 up to 90° and to the point of saturation, is .356 heat unit, or $20° \times \frac{526}{7000} \times .237$; and as the evaporation of the 11.65 grs. of moisture necessary to produce the equalization in moistness calls for 1.608 heat units, the whole amount of heat abstracted from the system in the process is 1.964 heat units, which is .008 heat unit more than in the former case.

If the degree of humidity is productive of decided effects on the economy in health and disease, the considerations which precede would seem to indicate that heating the air we breathe may be a source of harm. That the degree of humidity has much influence on the system, cannot be doubted; and that it is, under ordinary circumstances, as injurious when very low as when decidedly high, is, perhaps, equally certain. No doubt very dry warm air has a deleterious effect on the functional action of the skin and other parts. The unpleasant effects of it

on the eyes is familiar to every one. But the direct constitutional injury which may be produced by it is probably less in importance than the injury produced indirectly, though being markedly unlike the external air. One who enters or leaves a room the air of which is very warm and dry, on a cold day, sustains a more or less violent strain of different functions. As every one must move in and breathe the air out of doors, it is wise not to render it injurious by living habitually in a very unlike artificial atmosphere. Better to rely to a considerable extent on regulation of the clothing, than to raise the temperature of the air artificially to a high figure.

It has been affirmed that an addition of moisture to heated air is simply not wanted. This comforting conclusion is supported mainly by two reasons, to wit, that organic matter is removed speedily, and is uninjurious in proportion to the degree of dryness of the air, and that as expired air is always of a temperature of about 90°, and saturated, the impression on the system, so far as the humidity is concerned, when unheated, is essentially the same as when heated.

Now, these reasons are unsatisfactory. Little or much organic matter is expected to be present in the air of an inhabited room, according as it is or is not properly ventilated, and it is unlikely that any which may be present would be rendered more injurious within both a reasonable length of time and a reasonable degree of humidity. The statement that the air issues from the lungs at the same temperature and humidity, whether it is cold or warm, may be true, but even if a like impression were produced on the lungs by air of any degree of humidity when unheated as when heated, there is a difference of impression made on the surface, and through it on all parts of the body, which is of great significance. Then the state of the air without, as regards humidity, is not always the best. It may not be wise to keep the humidity of heated air very high, but assuredly it is also unwise to keep it very low. It is well to keep it at a moderate degree.

It being so difficult to keep the humidity of highly heated air at a proper degree, it is judicious, for this reason alone, to be satisfied with a moderately low temperature, to let it be, as a rule, from 60° to 65°. Especially is it wrong to have the air highly heated when the weather is very cold. The sensation of heat and of cold being to a great extent relative, the temperature of the air within should be regulated somewhat according to the temperature of the air without, unless a person is in it constantly. In truth, the craving for very warm air is induced largely by inactivity and habit. One can easily render himself chilly in air at 70°, by exposing himself awhile to air at 80° or 90°.

RIGIDITY OF THE OS UTERI.

Read before the Burlington Co., Medical Society, October 10th, 1882.,

BY WILLIAM H. SHIPPS, M.D.,

Of Bordentown, N. J.

Not the least among the many operative causes tending to retard or make difficult the act of parturition, may be mentioned "Rigidity of the Os uteri." This complication of labor may be dependent upon one of several factors; namely: Nervous or vascular excitement, induration of the os uteri, scirrhous or carcinomatous condition of the cervix, or entire obliteration of the cervical canal.

Examples of the first class are not infrequently met with, and, as a rule, offer no permanent barrier to the final successful consummation of labor. The other varieties, on the contrary, though of rare occurrence, act as formidable obstacles to the free passage of the child, and almost invariably necessitate the intervention of art.

Illustrative of one of the last named varieties, I ask the attention of the Society to the following case recently occurring in my practice.

At daybreak on the morning of August 17th, 1882, I was called to attend a Mrs. C., 42 years of age, of good physique, in her thirteenth labor. It may be well to mention the fact that I had attended the woman on two former occasions, the last being in July, 1881, at which time she was delivered of twins at seven months; the cause of this premature delivery was malposition of the placental mass, which almost entirely occluded the mouth of the uterus. Delivery was accomplished with difficulty, the woman being almost exhausted by the profuse hemorrhage. Fortunately, however, she made an excellent recovery, and was spared to figure in a different rôle the year following.

On my arrival at the house at this, her last labor, I was informed by the nurse that she had been in pain since midnight, and that they had summoned me on account of the increasing severity of the pains, and as they supposed, the probable speedy termination of the labor. At this time the pains were of moderate severity, and occurring at intervals of five or ten minutes; the mouth of the womb was dilated to the extent of about one inch in diameter, waters presenting,

through which the finger readily detected the head of the child occupying the third position of the vertex. On making the examination, I was struck by the peculiar conformation of the uterine orifice. Instead of the natural elastic feel characteristic of the normal condition, I noticed that the anterior and posterior lips, throughout their entire extent, appeared to be in a state of hypertrophy, forming a well defined band or ring of hard, inelastic, cartilaginous tissue, so unyielding in its nature as to preclude the possibility, as I thought, of its being overcome by natural causes. This hardness, though general, was more pronounced at a point commencing at the superior portion of the left lateral division of the os, and terminating at a corresponding point on the under or inferior surface. Besides this abnormal hardness, there was a want of uniformity in the contour of the uterine mouth, its edges being rugged, uneven and nodulated, probably the remains of old cicatrices resulting from lacerations in former pregnancies.

After assuring myself that no apparent progress was being made, I left her, to return at 10 A.M. Examination at that hour showed that no perceptible advance had been made. I made repeated attempts at dilatation, by means of the fingers, but with indifferent success. At 12 o'clock the waters ruptured spontaneously, the head still being high up in the pelvis. I then began the use of chloral, giving thirty grains in all, during the next two hours. At 4 P.M., no advance being evident, I called Dr. H. H. Longstreet in consultation, who confirmed the diagnosis, and agreed with me that, as the woman's physical condition was yet good, and she evidently possessed considerable reserve force, little would be lost by waiting a few hours longer, at the expiration of which time, if no improvement were manifest, incision of the uterine orifice would be made, with the hope of finally overcoming the obstruction. I visited the patient just before midnight, and found that relaxation was commencing at the right superior portion of the mouth. Before returning home I authorized the nurse to send for me immediately if my services were necessary. I was called at 5 A.M.; pains had increased in severity, with slight advance of the head, and the mouth of the womb relaxing throughout its entirety. At 7 A.M., a strong expulsive effort brought the head into the world. By this time the woman was pretty well worn out and had to be strongly urged to her duty. Despite my utmost efforts, some fifteen minutes elapsed before the body was born. The child was dead, finely developed, and weighed 13½ pounds. A few moments later I attempted the removal of the placenta, but found that I could barely touch its border with my index finger. I waited an hour, meanwhile practicing the so-called method of Crédé, and, as I supposed, that of every one else, without making the least impression.

The intervals of my attempts were filled in by efforts at restoring my patient to a state of consciousness, who about every ten minutes would fall into a condition of syncope. Finally, by way of complicating matters still further, she went off into a convulsion, which happily was of short duration. Concluding that a speedy termination of the labor was now indicated, I brought the woman to the edge of the bed, and introducing my hand into the uterus found the placenta high up in the womb and firmly adherent three-fourths of its extent; carefully breaking up the adhesions, I was successful in removing it entire. Examination now showed that nature had accomplished her end, not only by a gradual softening down of the hardened tissue, but had actually forced asunder the unyielding band, lacerating it, at several points, without seeming harm to the woman, as the sequel showed. The woman made a speedy and satisfactory recovery.

In reviewing this or analogous cases, the following questions might very naturally suggest themselves:—

1. What part do nature, venesection, chloral or other drugs and dilatation, play, in overcoming the obstruction?

2. When is operative interference necessary or justifiable?

3. The method of interference.

With regard to the first, I am fully persuaded in my own mind, that nature alone, in the case just cited, was the active and controlling agent in overcoming the difficulty. Venesection, medicines, and digital dilatation, though of unquestioned benefit in the ordinary forms of rigidity, are in these cases not only useless, but of positive harm, serving only to depress and harass the already exhausted woman. At times the power of nature in overcoming mechanical rigidity is simply wonderful; and yet, while accepting the truth of this proposition, we are not to suppose for an instant that our duty is simply to watch the gradual development and beautiful unfolding of nature's processes. The strength of the woman must be sustained at all hazards; lose sight of this, and nature sinks, helpless, before her task. This we can accomplish by means of the free exhibition of nourishing food, than which there is nothing better than beef tea,

milk and coffee, preferably the latter, and if occasion requires, brandy. The condition of the bladder and bowels must not be overlooked. But suppose that nature fails, then we come to consider our second query—

When is operative interference necessary or justifiable?

This question is not so readily answered. Whenever the condition of the woman is such as to lead to the belief that longer delay will undoubtedly imperil her safety, the time has come to interfere. What, then, are the indications pointing to this end?

So long as the woman's condition, as manifested by the pulse, skin and tongue, is good, wait!

If the cervix shows signs of yielding, wait!

If the pressure of the child's head upon the soft parts of the mother be not sufficiently great to jeopardize their integrity, wait!

But suppose the woman shows unmistakable evidence of exhaustion; the pulse is irritable and weak and increased in frequency, there is hemorrhage, attacks of syncope, or convulsions, fears are entertained lest harm may come of the continual pressure of the child's head; then the time for waiting has passed, and that for action is at hand. This brings us to a consideration of the last question:—

How shall we interfere?

The operation is unattended with pain, easily performed, and comparatively harmless. The patient is placed upon her left side, or back, and brought to the edge of the bed.

During the absence of a pain the index finger of the left hand is carried to that portion of the os uteri intended to be incised; the flat surface of a probe-pointed bistoury or hernia knife should be passed along the palmar aspect of the finger, to the required length, the knife is then righted, and a sawing motion is made from within outward and upward; some insignificant hemorrhage usually follows, but rarely gives rise to any serious embarrassment. The best and safest sites for operating are the lateral sides or the under border of the orifice; three incisions, as a rule, are all that will be required, while in not a few cases one or two will suffice. During the passage of the child these incisions will probably be somewhat extended; when the operation is performed imperfectly or too early, this accident will invariably follow. It must be admitted that the operation of incision, like every other surgical procedure, has its opponents as well as its advocates; among the former appearing the names of such distinguished authorities as Goodell and Albert Smith, of our own countrymen, and Baudelocque, Dubois, and Madame La Chapelle, abroad. Some of these authors enthusiastically proclaim dilatation by means of the colpeurynter of Braun, or the rubber bags of Dr. Robert Barnes, to be the remedy or agent par excellence for overcoming the non-spasmodic form of rigidity, and as emphatically protest against the use of the knife in these cases, as rendering the patient liable to serious laceration of the uterine body, with septic absorption as a probable sequence.

In answer to these objections, it is only necessary to state the familiar fact, that in almost every normal labor, particularly that of primiparæ, laceration more or less extensive occurs, followed only in rare instances by evidence of septic poisoning. Again, the forcible dilatation of any structure, especially if the operation be performed with any degree of rapidity, is necessarily always attended by a break in the continuity of the muscular fibres, if not actual laceration of the tissues involved. This I claim follows every attempt at dilatation of the os uteri, whether the force applied be a natural or artificial one; dilatation is, therefore, not exempt from the very dangers it pretends to avert. I am not to be understood as advocating the operation of incision in all cases of physical rigidity, but only when, after allowing nature a fair trial, she is found unequal to the task before her. It was my intention to consider in detail the other varieties of uterine rigidity, but fearing to trespass upon your time to that extent, I have postponed their notice until later.

NOTES ON HEADACHE AND SICK HEADACHE.

BY G. C. SAVAGE, M.D.,
Of Jackson, Tenn.

Through the kindness of Dr. Nicholls, of Philadelphia, and Dr. Taylor, of Corinth, Miss., I have had the pleasure of reading the "Notes on Headache," by S. Weir Mitchell, M.D., published in the REPORTER, Feb. 6th, 1875, one of the numbers to which my unnamed friend in Texas called my attention in a late issue of the REPORTER. I have not been able to procure the number issued Aug. 1st, 1874. If my Texas friend will be kind enough to send this number to me, I will appreciate the favor, and will return the journal and cost of sending.

I cannot infer the object my friend had in view in calling my attention to the "Notes" of Dr. Mitchell, unless it was that I might see that

the theory I had claimed as my own, by right of discovery, had been advocated by Dr. Mitchell eight years ago. I naturally sought anxiously for the journals containing Dr. M's. notes, that I might see what this man, for whose medical lore we all have the greatest respect, had written on sick headache. Although I have not seen the journal published Aug. 1st, 1874, I infer from the one published Feb. 6th, 1875, that in the former he had written nothing indicating that he had entertained any views, as to the causes and cure of sick headache, coinciding with mine as published in the REPORTER of July 29th, 1882, since he, in his February "Notes," after stating in his first paragraph that he would now consider "some forms of this disorder [headache] which are either undescribed or ill-described," says, in the beginning of his second paragraph, "and first as regards the headaches of some eye strain." Further on in the second paragraph he says that he stated in his paper published Aug. 1st, 1874, "that astigmatism, disorders of accommodation of the eye, and defects of power to converge or diverge, the optic axes, are alike the causes of *head pains;*" but he does not say that in that paper he thought that *sick headache* depended on these causes; and certainly he does not teach this doctrine in his February "Notes," before me.

The "Notes" by Dr. Mitchell are worthy of greater consideration, doubtless, than they have received. The history of his lawyer patient ought to be republished and read by every physician in the world; for perhaps, every physician living has had, has now, or will have, just such cases; and without the correct knowledge obtainable from Dr. M's. account of this case, such patients would go on suffering in their vocations, or be driven by their pains from their chosen professions. Medicines will never cure such patients, nor can residence by the sea, combined with rest from labor, do more than give temporary relief. There is but one cure, and that is properly fitted glasses. The headache (not sick headache) from which Dr. M's. patient suffered so much was dependent on compound hypermetropic astigmatism, which was corrected by proper glasses, fitted by Dr. Thomson, of Philadelphia, a perfect and permanent cure resulting.

Dr. Mitchell gives the histories of other cases, in his February notes, which I believe would read differently had he sent them also to Dr. T., for no doubt (judging from the histories given) errors of refraction predisposed them to, and near work excited, their attacks of headache (not sick headache). I have had similar cases, to whom, only a few years ago, I would have administered bromide of potassium, and directed out-door exercise and freedom from close work, in whom I found hypermetropia or astigmatism, the correction of which with a properly fitted glass, cured them speedily and thoroughly. In every one of my cases among school children who complained of terrible headache on close application, the causing hypermetropia was latent and became manifest only after the use of a 1 per cent. solution of atropia in the eyes. I have the records of several such cases, but will briefly note only two of them. No. 1, a boy, aged 12 years. During vacation he has always been free from headache, and up to the time he entered school he had suffered none from headache. Always within two or three days after entering school his headache would come on; and as long as he continued in school his headache would continue—never a day of freedom from it. A vacation of only a few days would bring relief which would continue until school duties had been resumed. The boy's not complaining when he had nothing to do but to play, almost made his parents believe that his complaint when studying was assumed. When his father consulted me about him he said "I wish you would examine my boy and see if you can find any cause for his headache that seems to torment him so. Always when we start him to school he begins to complain, and sometimes we are forced to stop him." The history I gathered from the boy and his mother led me to believe that the cause of his malady was some error of refraction. I tested his vision and found it in each eye equal to $\frac{20}{xx}$, *i.e.*, at a distance of 20 feet he could call letters made to be seen at that distance. Apparently he had perfect sight; but it was only made so by continuous tension of the ciliary muscles, for, on paralyzing these with atropia, I found his vision for right eye $= \frac{15}{cc}$ and vision for left eye $= \frac{12}{cc}$. A + 16 was given him for O.D. and a + 14 for O.S., these glasses correcting in full the existing errors of refraction. His headache vanished, and he is now able to study as hard and as long as any one, without the least inconvenience. He is no longer a dull boy. His cure was instantaneous and complete. To see well when the axes of his eyes were parallel he had to strain almost as much as a person with perfect eyes would have to strain when the axis of his eyes converged to a point 12 inches from him; so we see that my patient had to doubly strain to read. His was not sick headache, but one of that class of headaches about which Dr. Mitchell so ably wrote.

No. 2 was a little girl, æt. 12 years: always harassed by headache of greater or less severity, according to application when in school. She came to me, July 4th 1881, for relief. To her I was able to make the declaration that henceforth she would be independent of headache; for I expected to fit her with glasses that would bring her relief. Her vision for right eye, ciliary muscle active, was $=\frac{20}{xxx}$, astigmatism causing the manifest defect; while her vision for left eye was $=\frac{20}{xx}$. After paralyzing her ciliary muscles and dilating her pupils, I found the vision of right eye $=\frac{10}{cc}$, and that of the left eye $=\frac{5}{cc}$. A + 10 gave her vision for left eye $=\frac{20}{xx}$, and a + 12 ⊃ + 60 cyl. ax. 75°, gave her vision for right $=\frac{20}{xx}$. These glasses she has been wearing, for near work only since she was fitted, and she has been perfectly free from headache during the whole time. Her history, before she was fitted with glasses was very like that of case No. 1. Rest from school duties would have given her temporary relief, and bromide of potassium would have lessened her suffering for a time, but the only thing that could ever have given her perfect immunity was a full correction of the errors of refraction in her eyes. Only two nights since she said to me "I would not take the world for my glasses and be compelled to do without them."

I could multiply notes of cases of headache like the above, all corresponding to the cases noted by Dr. Mitchell in 1874 and 1875, but I will close this article by giving the history of one case of *sick headache*, a malady different from *nervous headache*, so-called, though dependent on the same causes, and so common that a history of an attack need not here be given.

SICK HEADACHE.

The patient whose history I am about to relate, in support of my theory for sick headache, published in the REPORTER, July 29th, 1882, had her eyes refracted by me about eight months ago, without any knowledge on my part that she had ever had an attack of sick headache, and without her ever having thought that her severe and frequent attacks of sick headache in any way depended on the condition of her eyes. She had just passed through an attack of typhoid fever, and had been so reduced by the fever that her ciliary muscles could act but feebly, even after she had been convalescent some weeks. While convalescing her vision was $=\frac{20}{xxx}$, and at times not even that good; but when well, the power of the ciliary muscles having been fully restored, her vision was $=\frac{20}{xx}$. She stated to me, however, that it now tired her much more to read than formerly, and that my statement, made to her while she was convalescing, viz., that she was far-sighted, was, perhaps, true. She had me to examine her eyes, under the influence of atropia, when I found the vision of her right eye $=\frac{20}{lxx}$, and that of her left eye $=\frac{20}{c}$. Her latent hypermetropia had been made manifest by the use of atropia. A + 42 gave her perfect vssion in her right eye, and a + 36 brought about the same desirable result in the left eye. After getting her glasses she wore them constantly until about four weeks ago, when she had the misfortune to break them. The comfort she had derived from their use had been so great, she wrote me, saying, "I am lost without my glasses, so please get me new ones as soon as possible." I went about complying with her request, still ignorant that she had ever been a sufferer from sick headache. My opticians in Philadelphia had to shape the lenses to fit her frames, so that about ten days passed by before she received her new glasses. In this short interval, though she used her eyes as little as she well could, she had a very severe attack of sick headache, an attack of which she herself declares she had not had during the whole time she had worn her glasses. She further stated to me, only a few days ago, that before I refracted her eyes she had an attack of sick headache almost every week of her life. Her relief is certainly a propter hoc and not a post hoc. This case is a strong link in the chain of evidence which will soon place my theory beyond doubt. I have other links in preparation, and will soon add them to the chain.

Again, I earnestly solicit the observations of others.

HOSPITAL REPORTS.

COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

CLINICAL LECTURE BY FRANCIS DELAFIELD, M.D., Adjunct Professor of Pathology and Practical Medicine.

Bright's Disease.

GENTLEMEN:—This is a man thirty-five years old, a boatman by occupation, who was admitted to the hospital two months ago. He says that in the course of his occupation he has been a good deal exposed to cold and wet, but he always had good health until two years ago.

Then, after taking cold, he had œdema of the feet and legs, and he noticed also that he passed a large amount of urine frequently. He had no vomiting, no headache, no disturbance of vision. This first attack of œdema of the legs lasted five weeks, and it incapacitated him from work. This condition gradually disappeared, and be-

tween this time and two weeks before his admission to the hospital he was perfectly well. Although two weeks before his admission he was perfectly well, still he was passing a large amount of urine. Then he took cold, and had another attack of œdema of the legs and feet, and this time the legs and feet reached a large size. The scrotum also was swollen, and he had an attack of acute bronchitis. When he was admitted to the hospital he was passing over 100 ounces of urine in the twenty-four hours, without any diuretic. The specific gravity of the urine was 1.015; it contained albumen and a few hyaline casts. There were no other symptoms. Since his admission, two months ago, he has gradually been improving, though there is still some œdema of the feet and legs, and he is constantly passing a considerable amount of urine—about 100 ounces in the twenty-four hours. The specific gravity is now 1.027. At the last examination there was no albumen or casts present. Here is a specimen of the urine which he passed during the past twenty-four hours. You will observe that the color is not perfectly normal, that it has not the clear, well-marked color of normal urine.

On looking at the man you see that he does not look badly. There is hardly any œdema of the feet and legs at the present time. The heart's impulse is somewhat diffused, so that it is difficult to place the apex. It is displaced a little to the left, as I judge from the stethoscope. There is no murmur. The patient says he has had constitutional syphilis.

That is the history of the case. Of course, many of you would say the man has chronic Bright's disease, or chronic diffuse nephritis; but the question is, what particular variety of chronic diffuse nephritis has he? I hear some one say "atrophic kidney." There is a good deal to be said in favor of its being atrophy of the kidneys. The large amount of urine that he is passing, the long continuance of the disease, the hypertrophy of the left ventricle, all of them point to the existence of atrophic kidney. But those are not the only elements in the case. The amount of urine that he is passing—over 100 ounces every day—is rather large, even for atrophic kidneys to pass a long while. Patients with atrophic kidneys will pass that amount for some time, but it is a good deal for them to pass all the time. Then, besides, you will observe that the one symptom which he has had besides the change in the urine is œdema of the legs. Now, dropsy is one of the least frequent symptoms that belong to atrophic kidneys. I do not mean that there are not plenty of cases of atrophic kidneys in which there is dropsy, but usually it is not the only symptom. If the patient has atrophic kidneys and has dropsy he will usually have some other symptoms besides. It is not often you have dropsy as the first and only symptom. And you will observe that that one symptom has troubled this man, and nothing else. Then, besides that, we cannot neglect the fact that the man has suffered from constitutional syphilis. So that, although it is possible that he has had atrophic kidneys, yet I think there is something else which may also suggest itself as being perhaps more probable.

"The large white kidney." If you should simply say the large white kidney, it would hardly apply. "The large white kidney of the diffuse variety." You mean chronic diffuse nephritis, and the large white variety; that would not apply in general. That is, the ordinary examples of the large white kidney would not give you such a history. But there is one particular form of the large white kidney which might give such a history; that is, the so-called waxy or amyloid kidney; that form of chronic diffuse nephritis in which the gross appearance of the organ is that of the large white kidney, and in which the tufts of the malpighian bodies and the walls of the blood-vessels are infiltrated with the so-called amyloid or waxy material. There is no absolute certainty, but the probabilities are that in this case the diagnosis would lie between these two conditions, between the simply atrophic kidney and the so-called waxy kidney.

But here, again, there comes in another element of uncertainty, and that is, that it is perfectly possible, although it is not very common, for a patient to have, at the same time, the atrophic kidney and the waxy kidney. All the waxy kidneys are not of the large, white variety. A man may have a kidney which has the ordinary appearance of the atrophic kidney, and the blood vessels may be the seat of waxy infiltration, and when that is the case you will get a history a good deal like the history of this man. The probabilities are that this man is suffering from one or the other forms of waxy kidney; that he has either the large white kidney with waxy infiltration of the arteries, or the simple atrophied kidney with waxy infiltration of the arteries. There is one part of his history, however, which does not belong properly to the waxy kidney at all, that is, the high specific gravity of the urine. You will observe that its specific gravity is between 1.015 and 1.027, the latter being the specific gravity at present, although he is passing 100 ounces daily. That is certainly not characteristic of either the large white kidney or the atrophied kidney, or of any of the forms of waxy kidney. But in spite of that, I think we will have to accept this high specific gravity as an accident in this particular case, and not be influenced by it in making a diagnosis of the disease.

Now as to the prognosis and treatment. The treatment is, practically, the being quiet in the hospital and getting better. The man has been improving since he came in; he will probably soon be well enough to go out and attend to his business again; how long it will be before he will have another attack we can hardly tell, probably not as long as the interval between the first and the second attack; it is hardly probable he will again go two years without another attack; probably next fall the œdema will again return. I do not know that there is any special advantage which can be gained by his following out any treatment during the interval. He will, of course, protect himself against exposure to cold and wet; he should avoid the habitual use of alcohol; he should take as good care of himself as he can, with the idea of putting off a recurrence of the attack as long as possible, but a recurrence at some time

or other is pretty sure to come. I should rather hope, in his particular case, that he would escape until next fall, but it is very likely that we shall at that time see him again.

CASE 2.—This patient is a man, thirty-two years old, who was admitted to the hospital over two weeks ago. The history was, that three months before the time when he was admitted he noticed that his feet and legs were becoming œdematous, and that at the same time he had ascites, the dropsy of the peritoneum coming first, and that of the legs and feet coming afterward. This dropsy has continued up to the present time. He has been tapped three different times. He passed his urine frequently and in small quantities. He has had no headache, and he denies having used alcoholic liquors. At the time when he was admitted there was a good deal of ascites, and there was œdema of the legs, feet and scrotum. The heart was pushed up by the fluid, as was also the liver. The specific gravity of the urine was 1.016, it contained albumen, and epithelial and granular casts. The man suffered a good deal from dyspnœa, apparently due to the pressure of the fluid. After his admission to the hospital the urine was passed in quantities from 45 to 15 ounces, and for some time lately the daily quantity has been small, from 20 to 15 ounces.

Two weeks ago his abdomen was tapped and 545 ounces of serum were drawn off. The dyspnœa, the nausea and vomiting which he was suffering from before the tapping, were relieved, and the amount of urine excreted was then increased. He did pretty well for several days, when the fluid began to reaccumulate, and the amount of urine passed during the twenty-four hours began to decrease, and so he has been going on, up to the present time. Yesterday his urine was of a specific gravity of 1.016; it contained albumen, granular and hyaline casts, and in quantity about twelve ounces. He was well until three months before coming into the hospital.

On looking at the abdomen, you notice that it is swollen, and that the cutaneous veins are distinctly increased in size. When we tap the abdomen with the finger we get the characteristic wave of fluid without any trouble. There is flatness on percussion as high up as the third rib on the right side. This, of course, means that the liver is pushed up by the fluid; that shows that the yielding of the diaphragm in this particular case has been greater than the yielding of the abdominal walls. You will find a difference in this respect in different cases of ascites. In some cases of ascites the abdominal walls yield to the pressure of the fluid a good deal, and the diaphragm yields comparatively little; in others the yielding of the abdominal walls is not as marked, and the diaphragm yields a good deal, being pushed upward into the thoracic cavity. This is evidently the case with this man. The abdomen is very tender; I presume he has some chronic peritonitis, and it is not worth while to distress the man in trying to feel the lower edge of the liver. There is very little doubt but what it is above the free border of the rib. I presume that it is a small liver pushed upward. The splenic dullness I cannot make out, because the liver and intestines are pushed up over the region where the spleen should be, and besides that the man is exceedingly sensitive.

We have, then, at the present time, marked ascites, tenderness over the whole of the abdomen, the liver pushed away upward, and you will observe, from the appearance of the man's face, that his general nutrition has suffered very much. He is very much emaciated; his whole condition is exceedingly bad.

Well, that makes up the history of the patient, and the question is, what disease or diseases is he suffering from? "Cirrhosis of the liver." I think there is no question but what he is suffering from cirrhosis of the liver. What else? He has some kidney trouble in addition to his liver trouble; now, what is it? "Cirrhotic kidney." Yes, the so-called cirrhotic kidney; the atrophic form of chronic diffuse nephritis.

You observe that the cirrhosis of the liver in his case is giving trouble in two ways: In the first place, it is producing dropsy to a very marked extent. He has a great deal of fluid in his abdominal cavity. The dropsy in his case is a very prominent feature, and a very serious feature, but in addition to the dropsy you will observe the man's appearance; look at the color of his face and the emaciation of the face and neck. All this is hardly to be explained either by the dropsy or the complicating chronic diffuse nephritis. How can we explain it? "By the presence of chronic gastritis." The only evidence we have of chronic gastritis is nausea and vomiting, and the fact that chronic gastritis is very common with cirrhosis of the liver. But you will observe that the nausea and vomiting in his case seem to depend more upon the pressure of the fluid than upon the condition of the stomach. After he has been tapped the nausea and vomiting are very much better, and they return again after the fluid reaccumulates. Chronic gastritis alone ought not to make such a looking patient as we have here.

"Functional disease of the liver." Yes; that the cirrhosis, in addition to producing dropsy by mechanical pressure upon the portal vein, has caused a change in the substance of the liver, which has so interfered with its functions that the man's whole nutrition has suffered in this way. That is the ordinary explanation of this condition, and I think it is sufficient, here, that the man's whole nutrition has been suffering, and is suffering now to a very great extent, because the liver ceases to perform the functions of the normal liver. It is impossible for the nutritive processes to be carried on properly unless the liver is performing its function properly; and there are a considerable number of cases of cirrhosis of the liver in which, in addition to the dropsy, we have this disturbance of the functions of the liver very marked, and when that is the case we get just such a looking patient as you see here—patients who look almost as if they were suffering from malignant disease.

I forgot to show you his urine. You will now observe that it is higher colored than it should be; that it looks as if it had blood in it, but the microscopical examination shows no blood, nor do chemical tests show the presence of any biliary

coloring matter, so that I presume the color is due to the presence of the coloring matter of the blood, without the existence of any blood corpuscles. We sometimes do have urine colored in this way.

CASE 3.—Here is a boy twenty-two years old, who was admitted to the hospital nearly a month ago. He had been sick three months before he was admitted to the hospital, and the first symptom which he noticed was dropsy of the feet and legs. The dropsy extended up from the feet and legs, and became general. At first the urine was diminished in amount, but afterward the quantity increased and continued at about the normal. He has had no headache, no disturbance of vision. When he was admitted to the hospital he was still suffering from general anasarca. There was no headache, no vomiting. He was passing twelve ounces of urine in the twenty-four hours, of a specific gravity of 1.026; it contained fifty per cent. of albumen, and also granular and epithelial casts.

The patient was put upon the use of warm baths every second day, and under this treatment his urine increased in amount up to from 50 to 80 ounces. He was also taking a diuretic in addition to the general bath, and the dropsy steadily diminished.

The patient was doing well and passing large amounts of urine until four days ago, when the dropsy began to return and has continued up to the present time. The urine again diminished in amount, the hot water baths were resumed, but the œdema increased somewhat again. Yesterday he passed about twenty-eight ounces of urine. Bitartrate of potash was the diuretic given.

Here you have a very straight-forward history indeed; a much plainer case than either of the other two cases which you have seen. You have a young man who dates his whole trouble back about four months ago, and the first thing that he noticed was that he was becoming dropsical, that there was œdema of the feet and legs, and that he was passing less urine than he should. The dropsy continued up to the time of his admission into the hospital, about three months, and it still existed as well marked general anasarca. At that time he was passing only about twelve ounces of urine daily, of specific gravity of 1.026, and containing 50 per cent. of albumen, and also containing granular and epithelial casts. As an effect of treatment the urine was increased very much in amount, so that now, instead of passing twelve ounces in the twenty-four hours he passes over one hundred ounces, and the dropsy then decreased. But he still has considerable dropsy, and the increase in the flow of urine is no longer having the effect to reduce the amount of dropsy, which it should have. Except for the dropsy, there have been no symptoms; the man has had no disturbance of the stomach, his color is fairly good, his lips are almost as red as they ought to be; I think there is no heart trouble. There is, however, a not very loud murmur at the base of the heart with the first sound, which is probably a blood murmur. The heart is not increased in size.

Now, as said, there is a very straightforward history of disease of the kidney of some kind. "The large white kidney." Yes, that particular variety of chronic diffuse nephritis. You could hardly have a more straightforward history of a case of that particular form of chronic diffuse nephritis. It is characteristic in every respect.

Now, as to the prognosis and the indications for treatment. With regard to the latter, the one indication is to get rid of the dropsy. The dropsy is the one thing that troubles him. You will observe that, at first, increasing the amount of urine had its proper effect upon the dropsy; that the dropsy diminished while the urine increased. But at the present time this effect has ceased; he passes nearly double the amount of urine that he ought to pass, and yet the dropsy has persisted, so that evidently we are not affecting the dropsy in this way. The use of the hot baths and the diuretics which should increase the flow of the urine are not getting rid of the dropsy. When a patient behaves in this way, and when he is still in as good condition as this young man is in, the indications are usually to stop the use of the diuretics and to use iron in some shape or other, for when you find that increasing the amount of urine has no effect upon the existence of the dropsy, it is evidence enough that there is no particular use of going on stimulating the kidneys and making them constantly pass more water than normal, when the dropsy continues, or increases just as it did before. So that while you may well enough continue your attention to the skin, continue the hot water or hot air baths. It is better at once to stop the internal diuretics and to commence with one or the other preparations of iron. If the case is not of very long duration, as is the case with this young man, you will often get good enough results from these means. If it was an older case, if this boy had been sick a year, or two years, instead of three months, then I should think it made very little difference what you gave him. These older cases of the large white kidney, when they exhibit the particular combination of an increased amount of urine with increasing dropsy, go on to do badly, no matter what you do. You can take this as a pretty good general rule, that in a case of large white kidney, over a year old, in which the patient has the combination of an increased amount of urine with increasing dropsy, the patient will not get better, but will continue to get steadily worse. But in the early period of the disease, when the symptoms have existed only a few months, then the condition of things is not as bad, and it will be possible enough for this young man still to get better, although he has this combination of dropsy and a large amount of urine.

The Absurdity of Anti-Vivisection.

The absurdity of the English law against vivisection is well illustrated by a remark of Sir James Paget. He says, "I may pay a rat-catcher to destroy all the rats in my house with any poison he pleases, but I may not myself, unless with a license from the Home Secretary, poison them with snake-poison."

EDITORIAL DEPARTMENT.

PERISCOPE.

Aneurism of Carotid—Ligature—Recovery.

Mr. Stanley Boyd reports the following case in the *Medical Times and Gazette*:—

J. De V., aged twenty-eight, was admitted on July 29th, 1876. The history he gave was as follows: During the month of February, 1876, he noticed a swelling on the right side of his neck, and becoming alarmed, he applied for relief to a woman living in St. Helier. For five weeks he continued under her care, the swelling steadily increasing. She treated him with "herb medicines," and gave him a plaster, which he wore for a month. No good resulting from these remedies, he next placed himself in the hands of a "charmer" residing at St. Ouen's, and every morning for seven weeks he drove nine miles into the country to see this man, who contented himself with simply touching the swelling. Finally, on July 29th, he entered the General Hospital, under the care of Mr. Charles Godfray.

At the time of admission the swelling was of large size, extending from between the angle of the jaw and the mastoid process to about an inch and a half above the sterno-clavicular articulation. The pulsation and bruit were plainly marked, and the aneurism showed a strong tendency to burst at the hinder part, where the skin was thinner than elsewhere, and of a claret color. The larynx and trachea were pushed far over to the left side. Swallowing, even of liquids, which for some time had been attended with great difficulty, now became impossible. Large nodes on the tibiæ, first noticed shortly before Christmas, revealed a syphilitic taint.

On July 30th, Mr. Godfray applied a silk ligature to the common carotid, close above the sterno-clavicular articulation, and considerable decrease immediately took place; but unfortunately the size of the neck was not taken until August 3d, when it was seventeen inches at the widest part, the patient being a very spare man. The ligature came away on the twelfth day (August 11) after the operation.

The tumor decreased slowly but steadily until about August 27th, when it began to increase rapidly, and in two or three days a fluid swelling had run upward to the ramus of the jaw and forward to the chin. Inability to swallow returned, and the larynx was again thrust over to the left side.

On the evening of the 30th violent hemorrhage occurred. About a pint of blood seemed to have been lost, but as the bleeding stopped before the head nurse—who was in the next ward at the time—could reach the room, it was not noticed whether the blood came from the proximal or distal end; it was, however, of a dark color. The swelling continued as large as ever; no pulsation or bruit could be detected in it. Any attempt to swallow, even the smallest quantity of fluid, occasioned violent coughing, which caused its return by mouth and nose.

On September 1st and 2d small injections of beef-tea were given, but they were retained for a short time only. On the afternoon of the 2d, Mr. Godfray passed a small-sized stomach-tube with less difficulty than had been anticipated, and the patient was fed with beef tea. On the same evening, eggs beaten up in milk were similarly given.

On the morning of the 3d the swelling had not decreased in size, neither had it become more solid. It showed strong signs of pointing at the hinder part. A needle, connected with an aspirator, was passed into it at this spot, and nine ounces of foul-smelling, dark colored blood were drawn off. The flaccid parts were kept in contact by strips of plaster. The patient felt much relieved by this operation, and on the following day he was able to swallow milk and eggs, mouthful by mouthful, but still with some difficulty. On the 4th and 5th the sac filled slightly with fluid from the surrounding parts.

On the evening of the 5th, after a fit of coughing, the sac burst into the pharynx, and a quantity of blood and mucus was coughed up, the sac being completely emptied. Great relief followed, and the larynx returned to the middle line. The patient now swallowed with much greater ease, the walls of the sac rapidly adhered, and he was discharged, well, on September 11.

September, 1882.—The patient is now in good health.

A Simple Operation for Varicocele

In the *Lancet*, Dr. Arthur E. Barker says:—

Having three cases to operate on last autumn, I dealt with them as follows: two on one day, the other five days later. The skin of the scrotum was thoroughly cleansed with a five per cent. carbolic lotion, as also all instruments and the surgeon's hands, no spray being used. The scrotum was then pinched up between finger and thumb, in the usual way, so as to include the veins and exclude the vas deferens; it was then notched with a scalpel, and through the opening thus made a needle bearing a medium-sized twisted silk ligature (previously soaked for about an hour in the same carbolic solution) was passed. The veins were then allowed to slip backward, and the needle was made to carry the silk forward again, through the same puncture, but this time in front of the veins. The latter was thus, of course, included in the two loops of silk leaving the scrotum by the same aperture. The ends of these were now tied tightly over the veins, about one-eighth of an inch apart. They were then cut short and allowed to slip into the scrotal tissues. Everything was in the meantime protected from any contamination by frequent wiping with a carbolized sponge. A little padding of salicylated wool was the only dressing.

The results need only be briefly alluded to. There was a very trifling swelling around the seat of ligature for a few days, together with slight tenderness on pressure, otherwise nothing

was complained of in the first two cases. In the third, considerable pain was felt for a day or two, and there was a little more swelling and tenderness. But in none of the three cases was there the slightest threatening of suppuration. The first left the house in ten days, the second within a fortnight, the last on the fourteenth day. They were then walking about without any discomfort, except the third, who, having had a very large varicocele, still felt a good deal of dragging in the loins on returning to his work, which was very hard, and some neuralgic pains. These, however, passed off later, under the use of laxatives, for obstinate constipation, from which he suffered, though he continued to work for long hours as a grocer's assistant. I watched all these three cases for several months, the last until quite recently, about a year after operation, and now regard all danger of the ligatures coming away as quite over. The latter could be felt under the finger as small knots, deep in the scrotal tissues, which appeared quite normal. Whether they will ever come away remains to be seen, but this is immaterial, as far as the patient is concerned, for they give no trouble now.

Comparing these operations, as far as they go, with the older methods, their extreme simplicity is worth noting, as well as the small amount of trouble or inconvenience to the patient. It is also of some interest to note that, in these three cases, at all events, it was possible to manipulate freely with silk ligatures, and yet introduce them in a sufficiently pure state to produce no suppuration of any kind; and all this with only the simplest precautions as to absolute cleanliness, and without the carbolic spray. There is also a satisfaction in knowing that the veins are thoroughly occluded, and that there is no possibility of the ligatures slipping or being too soon absorbed, as might be the case with catgut. If nothing else, the operation appears an interesting experiment, and worthy of further trial.

The Rational Treatment of Menorrhagia.

Dr. Arthur W. Edis read a paper on this subject, in the Section of Obstetric Medicine, at the last meeting of the British Medical Association, (*Brit. Med. Jour.*,) from which we extract the following. In the term *menorrhagia*, he includes all cases of uterine hemorrhage occurring in the practice of the gynecologist, whether as profuse or prolonged menstruation, or as a loss of blood from the uterus other than that which occurs at or about the time of parturition. Sometimes it acts as a safety valve, a smart attack of hemorrhage often serving to avert a still more serious effusion from the ovary, or its surrounding plexus into the peritoneal cavity, or even preventing an attack of apoplexy at the so-called climacteric period. Diagnosis is the most important element of treatment, for menorrhagia is merely a symptom, not a disease. The age of the patient will often give us a clue to the cause; cardiac complications from rheumatic fever, hæmatocele, ovarian irritation, constipation, etc., in the young; polypi, fibroids, retroflexion, retained products of conception, in the middle aged; climacteric irregularities, cancer in its various forms, hepatic disorders etc., between the ages of forty and fifty. In young plethoric girls, when menstruation is profuse, instead of iron, which will increase the trouble, regulate the diet, limit animal food and use bromides, to lessen ovarian irritation, along with an occasional saline aperient. In anæmic patients, when iron is used it should be combined with salines in moderate doses, as a chalybeate water. In single patients, where menorrhagia is marked and persists in spite of general treatment, an examination should be insisted upon. When the slightest irregularity in the appearance of the catamenia leads to the suggestion of the possibility of pregnancy, any attack of menorrhagia, and especially if it recur, should be regarded as a threatened miscarriage and treated accordingly. When uterine hemorrhage is severe, whether from imperfect expulsion of an early ovum, intra-uterine polypus, submucous fibroid tumor, or other similar conditions, in place of attempting to restrain the flow by linen or cotton packed in the vagina, a far more rational and scientific method will be to insert a sponge tent into the cervix uteri. This will ckeck the hemorrhage and dilate the cervix to facilitate subsequent examination. Hæmatocele is a frequently overlooked cause of menorrhagia, as is also extra-uterine gestation at an early stage.

If hemorrhage be severe and continuous, and the probability of extra-uterine gestation exist, the patient's life being evidently jeopardized by the amount of effused blood withdrawn from the circulatory system, the only hope of saving the patient is to make an exploratory abdominal incision, secure, if possible, the bleeding vessel, or remove the ruptured cyst, as may be found advisable.

Retroflexion, accompanied by congestion of the uterus, in patients who have borne children, is not an unfrequent cause of menorrhagia. A correct diagnosis is here essential before treatment is likely to prove of service. The two conditions are often so intimately associated that, unless both of them be dealt with simultaneously, permanent relief is not obtained. The misplacement serves to keep up the congestion, and the latter equally tends to prevent the uterus from assuming its normal position. Puncturing, scarification, or the application of leeches, followed up by hot water injection and glycerine plugs, may first be tried, to lessen the congestion, a ring pessary, or other appropriate support, being then inserted, to keep the uterus in its normal position, and thus lessen the tendency to a recurrence of the congestion.

The management of hemorrhage, due to large intramural or submucoid fibroids, is one often of much difficulty. Where ergot, bromides, cannabis indica, gallic acid, digitalis, and other similar remedies, fail to arrest the flow, and the patient's health is markedly affected by the repeated or severe losses, the question of spaying, division of the cervix uteri, or removal either of the fibroid or of the entire uterus, should certainly be entertained. The results obtained during the last few years by operative interference in these cases are most encouraging, and the operation well deserves more extended trial. No patient, the subject of uterine

fibroid, where the symptoms are so severe as to impair her usefulness or threaten her life, should be allowed to die unrelieved, without having the option of operative interference.

Vascular disturbances at the climacteric, or change of life, as it is popularly spoken of, should never be treated lightly, but always carefully investigated.

In some instances, regulation of the bowels, restriction as to diet, especially the amount of alcohol, and a proper amount of out door exercise, will be all that is requisite. In others, the hemorrhage persists, in spite of all treatment, and, on a careful investigation, epithelioma of the cervix uteri is at once detected, probably too late for any operative interference. In no case should hemorrhage at this period be diagnosed as change of life, without a careful examination being made and a correct diagnosis formed.

In cases of epithelioma of the cervix, when hemorrhage is a marked symptom, in place of giving ergot or iron and plugging the vagina, it will be much more rational to remove as much of the diseased mass as may be deemed prudent, with the écraseur or curette, or both combined, and then to apply either the liquor ferri perchloridi fortior, the persulphate of iron or the actual cautery.

Device for Estimating Hæmoglobin.

Dr. Charles Finlay, in the *Lancet*, says the following device for estimating the amount of O. hæmoglobin contained in a small quantity (say five cubic millimeters) of human blood will perhaps be acceptable to some of your readers who, like myself, have to work at a distance from reliable instrument makers, and might induce some of the latter to supply the profession with the necessary apparatus.

The principle of my contrivance is not new, being an application of Preyer's spectral estimates of hæmoglobin solutions, and of a tube similar to those employed by Dubosq, in his calorimeter, so as to compare successive measurable depths of a blood solution. The novelty, if such there be, consists in the use of a diluted solution of blood obtained from any red-blooded animal, as a gauge determining the depth of this solution, that will give one or other of Preyer's O. hæmoglobin spectra, and observing the difference of depth required to obtain the same spectra, after a cell, one centimetre deep and filled with one per cent. solution of human blood, has been introduced under the gauged animal blood.

I had only at my disposal a small Browning's pocket spectroscope, of the simplest pattern. I mounted it as an eye-piece, suited to my microscope, and fitted to its distal end, beyond the slit, a hard rubber tube, about twelve millimeters in diameter. The lower end of this tube was cut perpendicularly to its axis, and closed with a plain glass disc, well cemented around the edges. When this eye-piece is in position, and the sliding tube of the microscope is pushed home, the glass plate of the rubber tube touches another glass plate which forms the bottom of a cylindrical vessel standing upon the stage of the microscope. Into this vessel I introduce about fifteen cubic centimeters of a dilute solution of defibrinated blood (the requisite quantity, less than one cubic centimeter, being easily obtained by pricking, for instance, a vein under a chicken's wing), and graduate the solution so that from twenty five to thirty millimeters of depth are required in order to produce the particular spectrum selected as a type, and the value of which in O. hæmoglobin percentage should be especially determined for each particular instrument. The depth is, of course, measured by the distance between the two glass plates already mentioned, but it can be read off at once, provided the sliding tube of the microscope has been ruled on the outside with lines one millimeter apart, and numbered from above downward. The exact depth that produces the typical spectrum having been noted down, the instrument is ready for immediate use.

A cell formed of a piece of hard rubber syringe, No. 0 (say half centimeter, inner diameter), exactly one centimeter long and cemented upright to a microscope slide, is now filled with a mixture of five cubic millimeters of human blood in 500 (half cubic centimeter) of distilled water, and covered with a thin glass cover, excluding all air-bubbles. This cell is introduced between the stage and the glass bottom of the cylindrical vessel containing the diluted chicken's blood, and the typical spectrum again sought for. It will, of course, be found that a lesser depth is now required than before the addition of the centimeter cell with the human blood, the difference between the two depths, divided by the full depths previously noted down, multiplied by the percentage of O. hæmoglobin corresponding to the typical spectrum, and finally multiplied by 100, will be the percentage of hæmoglobin contained in the pure human blood from which the sample was taken.

Apomorphia—Morphia.

Muriate of apomorphia is a remedy which, in our country, has by no means come into such general use as yet, as the well-known effect of this remedy would seem to justify. In an article on cough and expectoration, * Prof. M. J. Rossbach gives the following report of his investigations regarding the effect of morphia in combination with apomorphia.

His results, gained from experiments on animals, as well as from clinical and general practice, have been extraordinarily favorable. Concerning the action of these drugs, his own words are as follows:—

1. Muriate of apomorphia can, alone and internally, without hesitation, be administered as an expectorant, in single doses of 0.005–0.01 ($\frac{1}{12}$ to $\frac{1}{6}$ grain); a dose of 0.03 ($\frac{1}{2}$ grain) *per diem*, in children and adults, sufficed to change an annoying and dry, frequent cough, into one rare, moist and not annoying, accompanied by easy expectoration; frequently much less, only occasionally, more is necessary. R. increased the *daily* dose up to one grain; it is, as a general rule, best to commence, in all cases, with a daily dose of half a grain, subdivided into four or six

* Sep. *Abd. Berl. Klin. Wochschrift*, 19, 20, '82 ref. *Deut. Med. Zeit.*, Aug. 17, '82.

doses, according to age and the nature of the case and the effect of the drug; this dose is then either diminished or increased. Vomiting, which occasionally will happen when a larger dose is given, even one usually not considered an emetic dose, does no harm. Subcutaneously, doses of $\frac{1}{100}$ to $\frac{1}{8}$ of a grain (through central influence) prove frequently emetic. The apomorphia seems also, in phthisical persons, to be a valuable substitute for morphia. This remedy (apomorphia) and emetics (ipecacuanha) and pilocarpia, he considers the expectorants κατ'ἐξοχήν, and these are the only ones he ever employs, as their action is sure and reliable.

According to R's experience, the following are the best methods of administering apomorphia:—

℞. Apomorphiæ muriatis, gr. ss–gr. $\frac{j}{6}$
Acidi muriat. diluti, ♏ viij
Aquæ destillatæ, f℥ v. M.
D. in vitro nigro (in dark bottle).
Sig.—A tablespoonful every two hours.

2. The combination of apomorphia with morphia causes a diminution in the frequency of the cough, and makes the expectorated matter more fluid.

℞. Morphiæ muriatis, gr. ss
Apomorphiæ muriat., gr. ss to gr. j
Acidi hydrochloric dilut., ♏ viij
Aquæ destillatæ, f℥ v. M.
D. in vitro nigro.
Sig.—A tablespoonful every two to four hours.

3. In certain cases the addition of atropia is highly recommended by R., but he is totally opposed to giving the latter together with the above medicine, *i. e.* in one and the same mixture, and prefers the following mode of administering all three remedies:—

℞. Morphiæ muriatis, gr. $\frac{1}{4}$ to gr. j
Apomorphiæ muriat., gr. ss to gr. j
Aquæ destillat., f℥ iv
Syrup rubi idaei,
(raspberry syrup), f℥ j. M.
Sig.—A tablespoonful every two to four hours.
℞. Atropiæ sulphatis, gr. $\frac{1}{60}$.
Pulv. glycyrrh,
Succ. glycyrrhiz., āā q.s.
Fiat pilula, dentur tales, No. xx.
Sig.—One or two pills to be taken at night.

The first solution is given during the day; the pills are best administered in the evening, between 6 and 10 o'clock; one every two hours, with one or two tablespoonfuls of the mixture at the same time, if the frequent irritating cough should indicate such procedure. This treatment is especially recommended in cases of abundant secretion, but not in phthisical persons with a cavity.

Salicylic Acid in Typhoid Fever.

At a recent séance of the Académie, M. Vulpian, made a long and interesting communication on the treatment of typhoid fever by salicylic acid. He had already experimented in this disease with the salicylate of bismuth, carbolate of soda, and boracic acid. With large doses of the bismuth salt, he obtained a notable fall of the temperature, and an incontestible amelioration in the general condition of the patient. But the effect was not lasting, and when pulmonary complications supervened and the full dose of 12 grains could not be given, it was found that smaller doses did not have the same effect.

In this disease it does not suffice, to destroy the typogenous poison in the intestine alone, for it has been already absorbed into the system. It is then necessary to follow it up and attack it in the blood and tissues of the organism.

Carbolic acid is too toxic to be administered in large doses; M. Vulpian has given carbolate of soda in pill form in doses of 30 grains per diem, but without obtaining any well marked effects. Boracic acid was given in doses of one-half ounce per diem, in a quart of tartaric lemonade, but here again the therapeutic action was almost nil. Salicylic acid has been used by many observers in typhoid fever. M. Vulpian first employed it rubbed up with phosphate of lime, then with sugar of milk, and finally alone. He administered about one drachm and a half of the pure acid per diem, giving from four to five grains every half hour. In most of the patients submitted to this treatment the temperature fell two or three degrees in from 48 to 72 hours, and there was a notable amelioration in the general condition of the patient.

In severe cases the action on the temperature was not so evident.

Salicylic acid does not appear to shorten the duration of the malady, and, as regards its influence in diminishing the proportion of deaths, the number of cases where it was used as an exclusive method of treatment are not sufficiently numerous, as yet, to express an opinion.

M. Vulpian does not, however, hesitate to affirm that no other medication produces so constantly a considerable fall of the temperature and so marked an amelioration in the general condition of the patient. He concludes that, while salicylic acid does not constitute a veritable curative agent, it yet has a powerful moderating influence on typhoid fever, and merits a prominent place in the ordinary treatment of this disease.

Extraordinary Case of Early Puberty.

Dr. T. Woods says, in the *Lancet*:—

The following case is, I think, worthy of being put on record: W. is now six years and seven months old, having been born on January 21st, 1876. A week or two ago I saw him while bathing, and was greatly surprised to see that his genital organs were as fully developed as in the adult, and his pubes covered with a thick crop of dark brown hair, presenting the appearance of a youth of seventeen or eighteen; hair is also commencing to grow on his upper lip. His height is about 4 feet 9 inches, and he is big and muscular in proportion, but I regret that I am unable to give his weight and chest measurement. His voice, for more than a year, has been gruff and hoarse, as it usually is at puberty, and his grandmother tells me that he has had hair on the pubes since he was three years of age. He is so wild and mischievous that she has had to apply to the magistrates to have him sent to an industrial school, which they consented to do, and he has now been committed for five

years. A few days ago he took away a tradesman's cart, upset it on the roadside, cut the harness into pieces, and galloped the horse about till he was tired of the fun, and then let it go. His clothes were taken away from him, and he was put to bed, to keep him from further mischief. He, however, managed to find his grandfather's best black trousers, cut off the bottoms, so that they might fit him, and escaped through the window. One day, recently, he found some pigs straying, and drove them some miles to a butcher, and tried to sell them; failing to do so, he gave them away to some one he met. It required three policemen to take him to the workhouse (to which he was sent until arrangements could be made for his removal to the industrial school), and when they had carried him there, face downward, as they were compelled to do, he smashed a bedstead into atoms, kicked the plaster off the walls, cursed and swore in a most fearful manner, and had to be removed to the police-station, for safety. He was not a large baby at birth, but grew rapidly after twelve months. He commenced to cut his permanent teeth between four and five years of age. His father is in a lunatic asylum, suffering from melancholia. I have known the child since birth, and am perfectly certain of his age.

Morphiomania.

The *Medical Times and Gazette* says that in a paper read at the Rochelle meeting (*Gaz. Hebd.*, September 2), Dr. Landowsky drew attention to the fact that, besides the cerebral disturbances caused by the excessive use of morphia, venous congestions were also induced by it, which in the long run led to permanent lesions, especially of the kidneys, inducing albuminuria or glycosuria. He also called attention to the too great frequency with which injections of this powerful agent are entrusted to inexperienced nurses and the patients themselves. Prof. Verneuil remarked upon the frequency with which patients who came to consult surgeons have before that time been trying and abusing the hypodermic method. In their case a condition is generated which, at the time they may have to undergo an operation, may compromise their existence by their intolerance of chloroform, or later on expose them to the occurrence of fatal erysipelas or diffuse phlegmon; not that they are still under the influence of morphia, but have become, through it, the subjects of glycosuria, albuminuria, etc. M. Rochard, in relation to the colossal doses that are sometimes employed, cited the case of a lady who injected as much as three grams (forty-five grains) of the hydrochlorate of morphia daily. He further remarked that even when large doses are injected, neither constipation, loss of appetite, nor any other affection of the digestive organs is produced, while even small doses taken into the stomach produce these effects. Dr. Landowsky has observed in several women who accustomed themselves to excessive injections, that small mucous bursæ formed on the sides of the first phalanx of the index and median finger, which are due to the manner in which these morphio-maniacs practice the injections rapidly, with one hand, when they are alone. In doubtful cases, the existence of these bursæ may throw light on the diagnosis.

Lesions of the Phrenic Nerves.

The *Lancet* says that the effects of lesions of the phrenic nerves have been studied experimentally by MM. Henocque and Eloy. The effects on respiration, of injury to one or both, were registered on recording apparatus. The immediate effect of a lesion of one nerve was found to be a change in the respiratory rhythm, the movements being at first rendered more energetic. After a few moments the diaphragm ceased to move on the side which had been injured, and the contractions of the inferior intercostal muscles and accessory elevators of the upper ribs were rendered feeble. The experiments were made on animals in which the respiration is both abdominal and costo-abdominal—the dog, cat, guinea pig, and the monkey. Death often rapidly follows an injury to the phrenic nerve, but some animals survive, and the thorax is then motionless on the corresponding side, especially in the cat and the monkey. The respiratory movements become visible a few days afterwards, and are of course due only to the intercostals. At a later period, during the reparation and regeneration of the nerves, the tone of the voice was observed to be altered. Respiratory tracings, taken two, four, and ten months afterwards showed the gradual return of the respiratory curve to the normal. But even when the rhythm was restored, the movements continued deficient in extent. Moreover, in spite of the regeneration of the nerves, there remained a hypertrophy of the inferior intercostal muscles, set up by their supplementary activity.

Reviews and Book Notices

BOOK NOTICES.

The Principles and Practice of Surgery. By John Ashhurst, Jr. M.D., etc. Third Edition. Enlarged and thoroughly revised; with 555 illustrations. Philadelphia: Henry C. Lea's Son & Co., 1882. 8vo, pp. 1064.

Dr. Ashhurst's *Surgery* has won more than an average share of professional esteem. It is a condensed treatise, covering the whole domain of the science in one manageable volume, and in these days of unwieldy, spread out encyclopædias, it is a relief to many to find a writer whose aim is to say the most in the least compass.

The present edition has had a thorough revision, the novelties in surgical practice and the recent observations in surgical science have been incorporated, but the size of the volume has not been materially increased. The opportunities of the author as a clinical teacher and hospital surgeon, as well as his experience in a large private practice, have been of avail to him in deciding, from personal observation, the superiorities of the methods he recommends.

His arrangement is perspicuous, and his language correct and clear. The work is well printed, and an excellent index closes the work. On the whole, we consider it the best system of surgery in one volume which could be named as the product of an American author.

Microscopical Morphology of the Animal Body in Health and Disease. By C. Heitzmann, M.D. 1 vol., 8vo, pp. 849. J. H. Vail & Co., New York. Cloth, price $7.00.

It is a satisfaction to welcome a work which is the result of intelligent, disinterested, thorough scientific research. Such is the one before us. It represents the results of more than ten years' devotion to histology, and will undoubtedly mark an epoch in that branch of science. While principally from the pen of Dr. Heitzmann, it contains a number of articles by others who have worked with him, or in the same direction; among these we may name Drs. Louis Elsberg, H. G. Beyer, U.S.N., Jeannette B. Green, John A. Rockwell, etc. These various associate authors have developed some special lines of observations which have a place in the general scheme of Dr. Heitzmann's book.

The fundamental difference between the histological theory of this work and those of other writers is the assertion that the doctrine of isolated cells as the basic form of organic life, as taught by Virchow, is erroneous. The real basic form is the protoplasm or bioplasson, and cells assume activity in the phenomenon of life, as they are brought into contact, as they unite and anastomose, and thus form an inter-connected network. The living contractile matter is not the cell, but the nucleus, nucleolus or contained granules.

The practical results of this new view are striking in the extreme, and offer the promise of wide gains in the fields of pathology and diagnosis. It is perfectly possible for the practiced microscopist to judge accurately of the general condition of the system, and even detect the presence of certain diseases by the appearance of the blood corpuscles alone. "In fact," says the author, "the microscope reveals so much of the general health of a person, that more can be told by it, in many instances, than by the naked eye, or by physical examination" (p. 61). Where the enthusiastic advocates of this method of research would draw its limits, we know not. One young physician is mentioned who refused to marry the girl to whom he was engaged, until she had consented to have some blood drawn and submitted to Dr. Heitzmann for his opinion as to whether the granules were just what they should be. We hardly know whether to say that we are glad or sorry to add that, after due scrutiny, he recommended the marriage!

The ground covered in the book may be briefly stated as follows: The author first reviews the phenomena of living, healthy protoplasm, tissues in general, connective tissue, nerve tissue, muscle tissue, and epithelial tissue. Thence he proceeds to discuss pathological processes; as inflammation, tuberculosis and tumors. Passing from these he takes up in order the skin, the digestive tract, the teeth, the liver, the respiratory and urinary tracts, the urine, and the genital tracts of both sexes.

The text is illustrated with 380 original engravings, made after very accurate preparations by Dr. Heitzmann. The literary finish of the book is open to criticism here and there, but not in important points. But a very important point is the total absence of an index. We cannot recommend any one to purchase a scientific work of 800 or 900 pages when the author and publishers have been so negligent of what they owe the reader, as not to supply this indispensable requisite to the proper use of the book.

The Library Index. R. G. Hutchinson, 41 Maiden Lane, N. Y. Half-bound. Price $2.50.

Physicians are, at any rate ought to be, a book-buying, library-owning class of people. Even a small library is more available if it has a well-arranged catalogue. Mr. Hutchinson has prepared a neat, well-made blank book, sufficient for a library of about 1800 titles. The pages are ruled with printed headings, giving title, author, publisher and date of publication, number of volume, size, style of binding and remarks. He will mail the book on receipt of price.

Speech and its Defects, Considered Physiologically, Pathologically, Historically, and Remedially. By Samuel O. L. Potter, M.D. Philadelphia: P. Blakiston, Son & Co. 12mo, pp. 114. Price, cloth, $1.00.

This is an essay which, as a thesis, took the Lea prize at the Jefferson Medical College. The author states that he himself was a sufferer from "dyslalia," and has been led to give the subject unusual attention. It is, in fact, a treatise on stammering and stuttering, and the general title of the book is wider than its subject matter. The views of the author are very judicious, and he exposes with an unsparing hand the tricks of the charlatans, the self-dubbed "Professors," that go about the country pretending to cure the unfortunates who fall in their way. He also sets forth clearly what the real means of relief are. An excellent bibliography of the subject closes the volume.

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FALLACIES IN MEDICAL TEACHING.

It is taken as prima-facie evidence, that if a man is a professor in a large college, a hospital physician to a populous hospital, and enjoying the well-earned reputation of a learned member of the profession in a great city, he is qualified better than any one else to teach medicine.

On the other hand, it can be shown that all these seeming advantages present also serious drawbacks to the success of the teachings of such a man. Not to his personal success as a teacher; we do not mean that; but to the value of his teachings. We maintain, and shall show, that just these apparently favorable surroundings incapacitate him from doing the most good to students.

To illustrate our position at once, from a country where it can be most readily demonstrated, we turn to Germany. As a rule, a professor in a German university has been a most earnest closet student; he has spent his nights and days in the library, over the dissecting table, in the hospital wards, at the dead room, peering through the microscope, writing for the press: has he ever seen the normal rise, development and termination of a disease? Quite likely he has not. When a patient is brought to a hospital, the disease has usually progressed far; the patients there are under entirely different surroundings from those in private life; the circumstances that it is, and must be, in a large city, bring into action a whole series of influences with which the average practitioner has nothing to do.

When the professor has acquired fame, is he more favorably situated to see disease as the ordinary physician meets it? No, even less so. He is called in as consultant in desperate cases, for infrequent visits, and has no time to watch a case. His opinions, his mode of practice, his acquaintance with the forms of disease, his estimate of the actions of medicines, must all be necessarily made up from a materially different series of observations to that of the great mass of his professional brethren. Strictly speaking, he is not qualified to give them the best instruction which they are capable of receiving; his doctrines must be misleading and his observations delusive.

We believe this is conspicuously shown in Germany, and the results of this state of affairs are very marked there. It may be freely conceded that in many branches of theoretical medicine the Germans stand easily ahead of the world; and it must be added, with equal justice, that in practical medicine, in the therapeutics of diseases they are far, very far, behind either the English or Americans. Any one who will examine the mortality statistics of the German hospitals will be shocked at the heavy death rate; but if he follows the professor through the wards, or reads many of the issues from the press, and then learns the indifference and often contempt with which the therapeutics of a case is dismissed, he will see the cause of this fatality. It has actually progressed so far now that a student or young physician who busies himself earnestly with the problem of curing disease, of the definite removal of sickness and restoration to health, is looked upon as of limited intellect,

and with little grasp on the greatest questions of his profession.

This is so already in Germany, and it is becoming so in this country. Our eminent teachers are too busy with lecturing, reading up, hospital work, writing, and consulting practice, to have any time for the patient observation of disease as it is seen by the physician of limited family practice, or the country doctor. We urge that this be recognized all around, and that the profession be on its guard against that decay of practical medicine which has struck the Germans and undermined their usefulness like a dry rot.

DANGEROUS OCCUPATIONS.

The recent death, in New York, of one of the line-men of the Brush Electric Light Company suggests some thoughts on the precautions that ought to be observed in the employment of men for all labor that may be attended with danger to life.

It seems that this man was employed to break and connect again the electric wires, while the current was passing through them. To do so, it was necessary to scrape off the insulating material, in order that the bare wires might be joined.

The company had issued a notice to all men so employed that they must uncover but one wire at a time, and after reconnecting the severed ends, to wrap the exposed parts with insulating material before exposing the second or continuing wire. This man had been in the employ of the company for more than a year, was considered one of their most intelligent men, and was, therefore, presumably aware of the fatal danger that might arise from disregard of this precaution.

When he had been at work for a few minutes only, he was noticed to be clutching both the negative and positive wires of the line, and was hanging limp and apparently lifeless against the wires stretched on the pole. His right leg was thrown over the cross-bar, and he swung in mid-air, the wires preventing him from falling to the sidewalk.

When taken down and removed to the Station House, the only marks of violence or disfigurement on the body were on the palms of his hands, which were terribly burned and blistered.

From this it would seem that the cause of death in this case must have been an electric shock received from the man grasping the two wires and thus making a connection between them. If both or one had been thoroughly insulated such a catastrophe could not have occurred.

Therefore we must consider that both wires must have been unprotected; yet it would seem very improbable that a man acquainted with the danger (as this man must have been) of handling two unprotected wires, would do so.

It could, however, happen that, being daily accustomed to work among electric wires (familiarity breeding contempt), this man, to save time, may have scraped the insulating material from both wires consecutively, intending to handle only one at a time; to complete the first step in his work, to cut, re-unite and insulate the first wire, before he touched the second.

After he had performed the first part (or scraping) he may have been rendered unconscious, by an attack of epilepsy, heart-disease, or cerebral inactivity from some other cause, and feeling himself falling, grasped for the nearest support, and seizing the exposed wires, received the fatal shock.

This is only an hypothesis, but it is one worth consideration.

The autopsy may not have revealed any lesion to account for this sudden attack of unconsciousness, but nevertheless it may have occurred, since pathology is far from being a perfected science. If one wire were found perfectly insulated, then, of course, our theory falls to the ground.

But the point we desire to make still holds good.

In many trades men are exposed in such dangerous positions that very clear heads and complete possession of full mental faculties are at all times requisite to prevent the occurrence of fatal accidents.

Thus painters, riggers, roofers, and so on, are so exposed that any slight attack of unconsciousness, even vertigo to a slight degree, may cause them to lose their footing and to be precipitated a fatal distance.

When men apply for service in the army and navy they are subjected to critical physical examinations, to determine their fitness or unfitness for the arduous duties they propose to undertake. This rule applying even to those whose occupation will be of such a nature that some forms of physical infirmity would not materially interfere with their usefulness.

Would it not be wise, in the interests of humanity, to subject all men proposing to engage in work that required constant self consciousness, a temporary absence of which might prove fatal, to a preliminary examination?

This idea is seemingly a utopian one, but is it impracticable?

More difficult tasks have been accomplished.

To make such a proposition a reality rests with the medical profession; they must instruct the public more fully in regard to the dangers hinted at, and suggest, re-suggest, and continually advise, the only available remedy.

THE SCIENCE AND STUDY OF HYGIENE.

That hygiene is truly a science, and a most progressive one, every reading physician will admit.

That it has of late and is to-day making rapid strides towards the position of an *exact* science, must also be conceded.

That it is not properly or sufficiently recognized by the medical profession in our country, is the third of the propositions which we feel sure facts will substantiate.

The universally recognized truths that we have in certain instances the absolutely sure means of preventing the inroads of disease, entitle the branch which teaches such precautions to the dignity of a science; this, without further argument, establishes the first section of our first proposition.

The rapidly increasing space devoted to the hygienic researches of great men, in our leading professional journals, demonstrates the progression of the science.

The wonderful and *accurate* discoveries of Pasteur, Koch, Wood and Formad, and others, all of which have an intimate relation to and bearing on the science of hygiene, tend to entitle it to rank among the exact sciences.

Thus, then, in a few words, we have given our reasons for all of our assertions save the last.

That hygiene is not adequately appreciated by the profession of this country, is abundantly evidenced by the position which it holds in the curriculum of some of our best colleges.

Constituting, as it really does, the most important, because the most beneficent branch of medical science, its teaching is relegated to an auxiliary course, upon which attention is not compulsory, and, therefore, very meagre.

It thus is made to adorn, rather than to form an important portion of, professional education. Ranking with botany, zoölogy and comparative anatomy, it does not assume, in the eyes of the inexperienced student, that magnitude to which its importance entitles it. He who may have the leisure and inclination to become an *accomplished* physician will attend this extra course, and thus acquire some little smattering knowledge of hygiene, while the majority of students will leave their alma mater with no knowledge or appreciation whatsoever of this most sublime science and fascinating study.

There are two classes of physicians, to each of which the science of hygiene will present itself in a very different aspect.

To the man who practices medicine *solely* as a *business*, who constantly considers *only* how much money he can make out of it, hygiene presents itself as an enemy, as a science to be discouraged, since it may tend to reduce his pecuniary gains.

To the noble-minded and philanthropic physician, who can see more than mere "*profit or loss*" in the grand profession of medicine, hygiene will present itself in its true aspect, as the noblest science to which the mind of man can be devoted. Yet to this selfish class, who would

belittle sanitation, because it would, so to speak, rob them, a few words are necessary.

When the public, when your patients, come to recognize hygiene in its true light, and to place it where it properly belongs, you will not lose by this advance.

Your duties will become twofold; for not only will you be called upon to cure disease when it has become established, but you will also be requested, by sensible persons, to instruct them how to avoid disease; so that you will thus have both fools and wise men for clients.

When the public learn that almost all diseases are preventable, and that we nearly all *ought* to die of old age, they will be just as anxious to have their physical condition inspected at stated intervals, and to receive advice that will tend to retain a good condition or to repair a vitiated one, as corporations now are to have boilers regularly inspected and repaired, that subsequent disaster may be averted.

But that the public may recognize the inestimable value of hygiene, the profession must first be made alive to its importance, and to accomplish this, the institutions of medical instruction must take an actively progressive step.

The chair of hygiene should be made a part, and an exceedingly prominent part, of the regular winter curriculum; the science should be thoroughly taught, and a most rigid examination be required in this branch, as one of the essential requisites to graduation.

England is rapidly showing its appreciation of hygiene; do not let us wait in this important matter, as we do for the fashions in dress, an indefinite period, to follow this worthy example. Let some prominent institution start the suggested measure and all the others will fall into line; the fruit is ripe, and he who plucks it first can have the largest bite.

The Parkes Museum of Hygiene.

H. R. H. Prince Leopold, Duke of Albany, has consented to become the President of the Parkes Museum of Hygiene. Many of the most distinguished names in England are found among its list of life members. It will no doubt be of much service in promoting and fostering an interest in sanitary matters.

Notes and Comments.

The Quarterly Compendium of Medical Science.

In compliance with the wishes of many subscribers, we shall hereafter issue the Compendium of Medical Science *quarterly*, instead of *half-yearly*, as heretofore. It will appear in the first week of January, April, July and October. The four numbers will make a volume the same size or somewhat larger than the two numbers of the Half-Yearly. The arrangement of matter will be in a general way the same.

It is believed that this change will prove acceptable to all who have hitherto taken the Compendium, and will, we trust, recommend it to many who have not yet subscribed for it. As a quarterly, it will embrace all that is new and valuable in the medical literature of both continents. It will contain a synopsis of everything of the first order of importance for the physician and surgeon to know. The advance of medical science all the world over will be faithfully mirrored in its pages.

We especially urge all subscribers to the Reporter to send us $6.00 for 1883, and take the quarterly Compendium along with the Reporter. We can assure them they will find it repays them tenfold.

Threatened with Typhoid.

A correspondent of the *Boston Medical and Surgical Journal* says: Let me give you a little item of personal history.

Several years ago I was an inmate of an institution in which typhoid fever showed itself. Two young gentlemen with whom I was intimately connected, were successively stricken down with it. (The conductor ventilated the sewers of the neighborhood directly under their windows.) One of these cases remained in the house, and was in part under my care. The diagnosis in each case was confirmed by gentlemen whose official position guaranteed their ability. After the disease was fully established in the second case, I found myself afflicted with a slight headache, marked dullness, quickened pulse, and, if I remember, a raised temperature. Fearing that my condition was the result of imagination (I had naturally dwelt much upon the sickness of my friends and my similar exposure), I applied for advice to two physicians outside of the institution. They both told me I was threatened with typhoid, and advised me to clear out, which I did. In the country I very soon returned to my normal state, and after per-

haps a week or ten days returned to my duty; long before either of the cases mentioned above had even begun to convalesce. There can be no doubt, at least there was none in the minds of my advisers, that if I had stayed I should have been the victim of typhoid; I was threatened with it, and the catastrophe was averted. Such cases are not rare. This one merely serves as an example.

The Respiratory Centre.

In *Pflüger's Arch.*, xxv, Dr. J. C. Graham makes a preliminary communication in regard to a *new specific regulatory nervous system* for the respiratory centre.

In the abdominal cavity are spread sensitive fibres, which have an analogous form to the respective fibres of the vagi, and form, in connection with them, the regulatory nervous system of the pleuro-peritoneal cavity. (1) On central irritation of the splanchnics, laid bare and prepared in the abdominal cavity and severed, always an expiratory stand-still of respiration sets in, the diaphragm completely collapses, while the abdominal muscles as expirators contract violently. The same result can be noted, if both vagi and sympathetic are cut through in the neck. (2) On division of the medulla oblongata in its most anterior part, as well as after division of the spinal medulla, between the 11th and 12th dorsal vertebræ, irritation of the splanchnics causes also, without exception, cessation of respiration during expiration. If the spinal cord is divided between the 4th and 5th dorsal vertebræ, irritation of the splanchnics has totally lost its effect. (3) In dyspnœa and apnœa also, irritation of the central stump of the nervous splanchnics exerts this specific influence on respiration; in apnœa after irritation the apparently collapsed diaphragm assumes a still plainer expiratory position.

These experiments tend to explain, to a great extent, disturbances of respiration which are so frequently noted in dyspepsia, as well as in other morbid conditions of the alimentary canal. It never seemed to us clear why, for instance, in ascites of high degree, the patient should so frequently have a similar trouble in expiration—not being able to get the air out of the lungs—as is noted and well-known in cases of asthma due to emphysema of the lung. That, in dropsy of the abdomen, inspiration should be difficult, was easily explained, in consequence of the encroached space, but the observations of Graham show also how disturbances of expiration in such cases, may be brought about.

Pathology of Herpes Zoster.

In two cases of herpes zoster, Dr. E Lesser found a morbid condition of the respective spinal ganglia; in the one existed an inflammatory process, evidently started in consequence of a tubercular pleuritis. In addition to these two cases, which we find described in *Virchow's Arch.*, lxxxvi, p. 390 *et seq.*, L. cites also two other cases, observed during life, in which the herpes zoster made its appearance in cases of kyphoskoliosis of the thoracic spine. The eruption, following the course of a spinal nerve, showed itself here on the side of the convexity.

Morbilli Scarlatina.

An eight-year old boy was affected with mild catarrhal symptoms of the respiratory passages and of the conjunctiva, being attacked by measles. On the fourth day, when the temperature had resumed its normal again, it suddenly ascended; there was enlargement of the spleen, angina and scarlatina exanthem, with miliary eruption. On the sixth day, mealy desquamation of the face, neck and throat; but synchronously the scarlatina eruption spread further; stomatitis developed itself, and then desquamation in flakes took place, which outlasted the mealy desquamation. Convalescence set in and the boy got well.

While it is generally thought that two such infectious diseases will not break out in the body at one and the same time, in this case their consequences, at least, seemed to have gone hand in hand with each other.

A Case of Fistula of the Pancreas.

The following rare and exceedingly interesting case is reported by Dr. D. Kulenkampff, in the *Berlin. Klin. Wochenschrift*, 1882, No. 7, and referred to by Prof. L. Rosenthal, in his *Centralbl. f. d. Med. Wissensch*, 28, 1882, p. 511.

A laborer, æt. 39, received a severe injury, being hit on the abdomen. After the grave inflammatory symptoms had apparently all subsided, the patient felt comparatively well, but complained of gastric disturbances. Gradually a tumor developed itself in the epigastric region, and growing to the size of about a child's head. As he was uncertain in regard to the diagnosis, Dr. K. cut carefully, first through the abdominal wall, in the linea alba; then he punctured the swelling with Potain's apparatus, and about a wine-bottleful of a clear fluid was discharged, containing a large quantity of albumen, but no

"Bernstein" acid. Later the peritoneum was attached to the abdominal walls, the tumor opened, and a litre of the same fluid taken out. He then established drainage, and daily ¼ to ¾ litre of this fluid was discharged. The wound closed, but a small fistula remained, and notwithstanding all endeavors, the skin surrounding it continued sore. This fact caused the suspicion that he had to do here with a pancreatic fistula, and the chemical analysis, which was made by the chemist, Dr. Hausmann, confirmed this. The fistula soon afterwards closed forever. We may gain from this case some approximate idea of the amount of pancreatic juice secreted within 24 hours in the human being.

Tonsillotomy and Hemorrhage.

Dr. N. A. Powell read a paper on this subject before the Ontario Medical Association (*Canada Lancet*). Statistics show that dangerous hemorrhage occurs in about 1 per cent. of all tonsillotomies. After the operation, the surgeon should not lose sight of the patient for some hours, but should make frequent and careful inspection of the throat. Blood may pass into the stomach, and give no external sign till blanching of the face or faintness shows its loss. If he finds hemorrhage in unsafe amount, he should resort at once to direct pressure, either with the fingers or a sponge, on a firm holder. After this, he should examine for bleeding points, and twist them. Cold should be applied, and in the failure of all measures, ligature of the external carotid, or of the common trunk, may be considered.

Resorcin in Cholera Infantum.

Dr. M. Cohn, in his inaugural thesis at Stuttgart (*Centralbl. f. d. Med. Wissen.*, 1882, *p.* 512), speaks of the effect of resorcin in cases of cholera infantum. He made use of a solution of 0.3 (5 grains) resorcin, six drachms of water and about two drachms of simple syrup. He observed no disagreeable side effects, and of 35 children who had suffered from summer complaint, 30 rapidly regained their health. These observations were made at the University clinic for diseases of children, in Stuttgart. In no case was noted any bad results, and Cohn considers this remedy almost a specific in catarrhal inflammatory conditions of the mucous membrane of the alimentary canal in children. He found it also uniformly successful in all cases of stomatitis, aphthæ, etc.

Specific for Sore Throat.

After a large number of observations, Dr. Robt. N. Hormazdji, of Cheltenham, has come to the conclusion, that in all acute cases of *tonsillitis* salicylate of sodium is a specific, while in chronic cases it seems to possess no effect whatever. He recommends about 15 grains of the remedy every hour, till the most urgent symptoms are relieved, when only half the dose is administered. At the same time he employs a gargle, consisting of about 10 grains of the salicylate of sodium, one ounce of glycerine and three ounces of water. He found the remedy especially specific in its effect in very acute and severe cases, as also in the angina of scarlatina, and of erysipelas.

Function of Spleen and Bone Marrow.

Dr. Theo. Korn (*Virchow's & Arch.*, lxxxvi. p. 406), examined the hæmatogenesis in pigeons, withdrawing from a series of animals, in intervals of five days, from five to seven grms. of blood; he then repeated the same experiment in animals the spleen of whom had been removed four weeks before. The normal power of resistance of pigeons against venesection was not diminished by the extirpation of the spleen. In the first series, Korn demonstrated, in every case, atrophy of the spleen. In both series the observation was made that the marrow of the bone became richer in blood, while a great part of its fat seemed to be absorbed and made use of for other purposes. While these experiments clearly show that the spleen, at least in birds, is of no importance for the regeneration of the blood, they demonstrate the fact that the marrow of the bones undoubtedly participates in the formation of this fluid, which is the more apparent in birds, as many of their bones do not contain any marrow at all.

Bone Gummata.

From careful investigations made by Dr. Chiari, in Vienna, we learn, that in syphilis, *gummata* in the *marrow* of the bones happen far more frequently than has generally been believed to be the case. They rarely appear on the surface, and are, therefore, seldom recognized. We are well aware that the osteocopic pains, when they are not due to periosteal affections, have not found any explanation as yet. From the results of the post-mortem examinations by Chiari, we draw the conclusion, that in all such cases we have to do with such gummata in the

marrow of the bones. The remarkable influence of iodide of potassium on all gummatous formations would also explain its rapid beneficial action in such obscure osteocopic pains.

The Influence of Blood Pressure on Cardiac Inhibition.

The *Lancet* says that Messrs. Sewell and Donaldson have been investigating the effect of alterations of blood pressure within the cavities of the heart upon the inhibitory function of the pneumogastric nerve. With increase of the venous pressure, while the arterial pressure remained constant, it was found that the inhibitory effect of an electric stimulus was lessened. Variations of arterial pressure did not have any effect upon the action of the vagus.

Displacement of the Bones of the Skull

In the *Revue de Méd.*, 1882, ii, p. 112, Dr. I. Parrot reports three cases of tubercular meningitis in children, nine months, two and three years old. The cases ran a very rapid course. The interesting observation Parrot made on these cases was a displacement of the bones of the roof of the skull. The bones separated up to 3 mm. from each other. The space between them was filled by a sanguinolent fluid. We must remember that they were not cases of acute hydrocephalus, where, in consequence of extravasation, such separation of the bones, not firmly united as yet, would have been most natural, but cases of tubercular meningitis, where the simple inflammatory exudation produced this result.

An Abnormally Long Processus Styloideus.

Two cases, in rapid succession, appeared at the University clinic for internal diseases, in Vienna. Both persons complained of great and continuous difficulty in swallowing, and in both an unusual prolongation of the styloid process was detected as cause of the disturbance. The process could be felt behind the tonsils. In the one case the right process was elongated, in the second, both. In the latter both tonsils were of the size of a large bean, without presenting any sign of inflammation, and pushed forward. In the first case it was possible to fracture the bone, and then to give the broken piece such a direction tha the impediment to swallowing ceased and never reappeared, while in the other case they were not able to fracture the bones.—*Wiener Med. Wochenschr.*, 1882, *No.* 5.

Ether Inhalations in Angina Faucium.

In the *Riv. Clin. di Bologna*, Prof. Concato recommends ether spray as an inhalation in sore throat. The patient takes the exit tube of a Richardson's spray producer in his mouth, and sulphuric ether is sprayed against the pharynx for three minutes; this is repeated every three hours. Six cases were cured without other remedies. Each case began with a rigor and a sharp attack of fever, temperature 104° F. There was swelling of the sub-maxillary gland, and pain and difficulty in swallowing. The tonsils were swollen and protruding.

Hermaphroditism.

The *Lancet* says that a woman was recently delivered, in the British Lying-in Hospital, of a living child, which presented the characteristics of so called spurious hermaphroditism. There is a large penis or clitoris, with a prepuce bound down by a strong frænum. Immediately below this is a small canal, capable of admitting a good-sized probe, and from which urine is voided. The penis (?) is of natural size for a newly-born infant, and presents at the apex a well-marked depression, resembling the external urinary meatus. The scrotum (?) is divided, and resembles the female labia, but no trace of testes can anywhere be discovered. So equivocal are the appearances that it is at present impossible to determine the sex of the child. Dr. Fancourt Barnes, whose patient the mother is, seems to incline to the opinion that the type is rather feminine than masculine. If the child lives, it will, in all probability be shown to the members of the Obstetrical Society, when the problem of the sex may be solved.

The Last Thing in Incubation.

The *Lancet* is authority for the statement that M. Tarnier, of the Maternity Hospital, in Paris, has had constructed a box which is very similar to the incubators used for poultry. Into this he places all the weakly and sickly children.

This box is divided into two compartments, the lower one being used as a reservoir for hot water, while the infant is placed in the upper one, which is well stuffed at the sides and fitted with a sliding glass cover. The temperature is maintained at 86 degrees, Fahrenheit, and M. Tarnier has found that by keeping infants in the incubator for a period varying from two days to six

weeks their vitality is enormously improved. He has made experiments upon five six-months, children, six seven-months, and thirteen eight-months, children, and he has only lost two of them, whereas, according to his statement, three-fourths of them would have died but for this adventitious aid to vitality.

Traumatic Ophthalmoplegia.

Dr. Gruening recently presented to the New York Society of German Physicians (*New York Medical Journal*) a man who, after receiving a sharp blow on the left eye became blind. The lids were discolored, upper lid paralyzed, and bulb immovable, so that there was paralysis of the motor oculi, abducens, trochlearis and optic nerves. The pupil was stationary and large. The diagnosis was, fracture of the base of the orbital pyramid, with rupture of the optic nerve and compression of all the nerves passing through the superior orbital fissure. Iodide of potassium, with hypodermic injections of strychnia and faradization constituted the treatment. At the present time the bulb could be moved slightly in all directions. Fracture of the orbital pyramid is usually followed by atrophy of the optic disc.

Hydrophobia Cured with Aconite.

Dr. D. H. Cullimore reports, in the *Lancet*, the case of a boy aged ten years, who, some three weeks after being bitten by a supposed rabid dog, commenced to exhibit symptoms of hydrophobia. As soon as the nature of the disease was suspected, strict quiet was enjoined, and he was given one minim tinct. aconite, six grains bromide potassium, six minims tinct. cinchona, to half an ounce of water, to be taken every half hour for twelve doses and then three times a day. He was restricted to milk and arrow root. In about two months he was discharged, cured. The author gives a long theoretical explanation of the action of aconite in this disease, which it is unnecessary to notice here.

Oxygenated Water.

M. Brochin reported some experiments made by M. Paul Bert and Becquard at a recent meeting of the Société de Médecine Pratique (*British Medical Journal*). Oxygenated water was used with great success in the treatment of purulent cystitis, ozæna and ringworm; also, internally in uræmia and diabetes. To preserve it, it must contain an acid, for which hydrofluoric acid is used. A certain amount of oxygen is liberated from this water, in the form of ozone, and it is in this way that it acts.

Bilateral Herpes Zoster.

Dr. Zinsser reports a case of this affection in the New York *Medical Journal*. Bilateral herpes zoster is very rare. But three cases are reported. The attacks were quite frequent, and were regularly preceded by a peculiar train of symptoms similar to sea-sickness. The patient is otherwise in good health, strong, and by no means hysterical. His disease is probably of central origin.

Correspondence.

Congenital Occlusion of the Rectum.

Ed. Med. and Surg. Reporter:—

August 17th, 1882, Mrs. S., of this place, aged 28, was delivered of an apparently healthy female child, by my partner, Dr. J. A. Rawes. The child urinated freely that day, but had no motion of the bowels up to the 19th, when we were called in. It refused to nurse, lay quietly, but would occasionally strain violently. An examination revealed a natural anus, but on attempting to introduce the end of a female silver catheter, we met with an obstruction, half an inch from the external parts. On introducing a speculum it revealed a complete cul-de-sac, the bottom presenting a dense fibrinous structure. Assisted by Dr. J. H. Mack, an experienced practitioner, we etherized the child, passed a catheter up the vaginal canal, and introduced a bistoury, guided by the catheter, through the bottom of the sac, in the direction we hoped to find a termination of the rectum, but failing to reach it, resorted to a trocar, passing it up to the promontory of the sacrum, when we desisted and abandoned the operation. The parents objected to our making an artificial anus, and we were compelled to leave the child to its fate. It died on the 20th, and on the 21st we made the autopsy. The intestines were very much distended with gas, but they and all the abdominal viscera were in their normal situation, excepting that the descending colon terminated in an expanded pouch, on the left lateral wall of the belly, above the pelvic basin. On inflating it with air (after removing the meconium that distended it), we could discover no opening of any kind, but attached to the end and extending down the entire space usually occupied by the rectum, was the same dense fibro-cellular structure that formed the floor of the anal cul-de-sac. The health of the mother had been good during her gestation, and she had received no shock or fright that could be assigned as a cause for so deplorable a malformation.

H. E. W. Barnes, M.D.

Macksburg, Iowa.

State Medical Society of Virginia.

ED. MED. AND SURG. REPORTER:—

The State Medical Society of Virginia, which lately held its twelfth annual session at the Fauquier White Sulphur Springs, had a good attendance; the average number is about fifty Fellows, among whom may be mentioned, Professors Hunter McGuire, and James, of Richmond, L. B. Edwards, editor of the *Virginia Medical Monthly*, Drs. Dabney, of Charlottesville; Jackson, of Norfolk; Fauntleroy, of Staunton; Bedford Brown, of Alexandria; and Prof. I. L. Cabell, of the University of Virginia, President of the National Board of Health.

Hon. James M. Brooks, an eminent lawyer of Warrenton, delivered the address of welcome. It is to be regretted that so few papers on medical and surgical topics were prepared for the occasion. Dr. Bedford Brown's, on "Infantile Pneumonia"; Dr. Taylor's, on "Abdominal Surgery," for which he received a fifty dollar prize, and Dr. Elzey's, on "Alcohol," for which was also awarded a prize for the same amount, were all excellent productions. Dr. White, of Richmond, and Dr. McKenzie, of Baltimore, both youthful, described diseases of the eye and ear with marked ability.

The resolution condemnatory of the action of the New York Medical Society admitting irregular and homœopathic physicians to membership, contrary to the spirit and letter of the Code of Medical Ethics, which governs the profession in the United States, was unanimously adopted.

The society adjourned to assemble next year, as the guests of the proprietor of the Rockbridge Alum Springs. Whether such precedents for the sober-minded M.D.'s (usually so at home) to convene at fashionable watering places, will prove advantageous, is questionable.

NOUS VERRONS.

NEWS AND MISCELLANY.

Pharmacy and Malaria.

The Boston *Journal of Chemistry* says that at a recent banquet of the Illinois Pharmaceutical Association, Mr. E. S. Baldwin, an editor, responding to the toast of "The Press," and referring to old times, said: "It did not then take a student two years at a pharmaceutical college to learn that when he could not read what the doctor had written he should put in aqua pura, syrup simplex, and podophyllin. No, sir; this blessed system was not invented then. When we remember what our ancestors suffered on our behalf, we no longer wonder that they had rugged constitutions, or that we have been permitted to enjoy the effect of their tonics in the shape of hereditary dyspepsia. . . . On entering a modern drug store, you walk boldly up to the be-moustached and be-jeweled clerk. If you know your business, and it is a temperance town, you wink at the fellow, and say something about malaria. It is a matter of indifference just what you say. The single word 'malaria' is the golden open sesame. . . . Whenever I see a man coming out of a drug store, and wiping his mouth on the back of his hand, I realize to its full and awful extent the hold that malaria has on this unfortunate people. What the drug stores in towns where a strict license law prevails would do without 'malaria,' is a hard problem."

Science on the Stage.

From the Boston *Journal of Chemistry* we learn that it is proposed to try a novel experiment at Paris, by producing a series of scientific dramas at one of the theatres, with the object of combining amusement with instruction. Three plays have already been provided, and their titles clearly indicate the direction in which the audience is to be instructed. The titles are: "Denis Pepin, or the Invention of Steam;" "Kepler, or Astronomy and the Astrologer," and "Gutenberg, or the Invention of Printing." The result of this new dramatic venture will be awaited with interest. Its success may be the inauguration of a new era in science teaching. A most excellent idea, which we hope will be carried out.

Egyptian Treatment of Syphilis.

In the course of an article on "Medical Notes of Travel in Egypt," by Dr. Josiah Williams, in the *British Medical Journal*, occurs the following:—

The native treatment of syphilis in young girls is very primitive and very barbarous. Close to the town (Souakin) in the Red Sea, is a little island, called originally Sana Gin, and from which the town takes its name. The girl is taken across to this island by six women; she is then laid naked on her back; on each arm and each leg sits a woman, another on her chest. The operator, another woman, who is provided with a sharp sea-shell, scrapes away in the vagina until she is satisfied that all diseased parts are removed, and then, utterly regardless of the shrieks of the girl, gets a handful of sand from the sea, and rubs that in. The disease is then supposed to be cured, by this rather rough operation.

Sydenham.

Of Sydenham, Dr. Oliver Wendell Holmes says: "He had his hypotheses, like others of his time; he talked about the humors, as preceding generations had done; but he kept his eyes open, he watched the progress of disease, he noted the influence of times and seasons, he recognized the meaning of the efforts of nature in the cure of disease. He ordered free ventilation for diseases in which the patient had been "stifled in bed;" he directed horseback riding for consumptives; he prescribed a roast chicken and a pint of canary for a nervous young man whom the pedants and the pathologists of his day would have probably bled and drenched; in short, he was a man of excellent judgment and much more than common sagacity, and did not allow his theoretical speculations to blind him to the facts of disease before his eyes. It is almost two hundred years since Sydenham died,

but there is wisdom in his writings which never grows old."

A Drunkard's List.

It is announced, in the *Journal d' Alsace*, that, in pursuance of a recent decree, the authorities of the Haute Alsace have issued a list of the drunkards in the town of Sainte Marie aux Mines and the neighborhood. The number of these persons is thirty-one; the youngest being twenty three years of age, and the oldest sixty-eight. Innkeepers and others are, in future, forbidden to sell intoxicating drinks to any of those who are thus advertised.

An Enterprising Undertaker.

The *British Medical Journal* says that an enterprising London undertaker has issued a circular to medical men, asking for introductions to funerals, and offering commissions. The *Journal* very properly remarks that this is an insult to those to whom it is addressed, and will certainly tend rather to injure than benefit the party in question.

Pathological Society.

At a stated meeting, held Thursday, October 12th, 1882, the following officers were elected: *President*, James Tyson. *Vice Presidents*, J. Solis Cohen, E. O. Shakespeare, F. P. Henry, J. B. Roberts. *Secretary*, P. Skillen. *Recorder*, C. B. Nancrede. *Treasurer*, M. S. Meech. *Curator*, Carl Seiler.

The Age of German Medical Colleges.

From the Chicago *Med. Jour. and Ex.*, we learn that the University of Prague was founded in 1348; Vienna 1365; Heidelberg 1386; Leipzig 1409; Frieburg 1454; Griefswald 1456; Basle 1460; Munich 1472; Jenna 1568; Wurzburg 1582; Gottingen 1737; Berlin 1810; Zurich 1833.

Items.

—In England, during 1879, 308 deaths out of a total of 271,496 were ascribed to eczema.

—Dr. Luigi Concato, the celebrated Professor of Clinical Medicine at the University, Turin, is reported to have recently died.

—The death is announced of the celebrated chemist, Professor Wöhler, of Göttingen, at the age of eighty-two.

—The circulation of the *British Medical Journal*, at the last Association meeting, was reported as 11,000 copies weekly.

—Blackmore says: "The common lay mind hates the lawyer, as the lay body objects to the doctor, and the soul is timorous of the parson."

—An anti-vaccination society has been formed at Hartford, Conn. About a dozen persons constitute the organizing membership.

—A combination of ergot, belladonna and iodide of iron is strongly recommended in juvenile nocturnal urinary incontinence.

—Cannabis Americana, locally applied, is the latest treatment for "reasoning mania." The fibre is the part preferred.

—It has been decided in Paris that there can be no binding agreement between a patient and his doctor, the former not being regarded as a free agent.

—There are now only nine states without Boards of Health, and Pennsylvania and Ohio are the only large ones among them. For shame!

—Mrs. Nathanial Montefiore has given £2600 to University College Hospital, for the endowment of two beds, in memory of her late brother, Sir Francis Henry Goldsmid, Bart., and her late son, Mr. Leonard Montefiore.

—Dynamogen is the name of a new explosive, invented by M. Petri, a Vienna engineer. If the enthusiastic claims of the inventor are not an exaggeration of its merits, it will certainly prove a dangerous rival of gunpowder.

OBITUARY NOTICES.

Dr. George A. Ward died at Cerro de Pasco recently. He served as surgeon during the American war, and was, for many years, a professor at Yale College.

QUERIES AND REPLIES.

Mr. Editor:—Believing that the REPORTER is read by a greater number of physicians than any other medical journal in the United States, I ask for information from that great body as to the results, in their experience, of the *hypodermic injection of Morphia* or other medicines *in veins*. Have any of your reader ever observed fatal or very serious effects from this accident? W. S. F., *Md.*

MARRIAGES.

AULDE—McILHENNY.—On Thursday evening, September 28th, 1882, at the residence of Benjamin Jacobs, Bridesburg, by Friend's ceremony, John Aulde, Jr., M.D., and Emmie McIlhenny, all of this city.

BOBERTS—WALLACE.—At the residence of the bride's parents, in the North Highlands, Sept. 20th, by the Rev. R. M. Roberts, the groom's father, assisted by the Rev. Robert Kay, L. G. Roberts, M.D., of Bedford, N. Y., and Miss May A. Wallace, of the North Highlands.

BRUNNER—BAUS.—Tuesday, October 10th, 1882, at the residence of Mr. Joseph Rosenbaum, 2139 Green street, by Rev. L. Y. Graham, Edgar P. Brunner, M.D., and Miss Amelia D. Baus, all of Philadelphia.

DARLINGTON—GARRETT.—On Thursday, September 28th, in the presence of the Mayor, at the residence of the bride's parents, Horace H. Darlington, M.D., of Concordville, Pa., and Kate C. Garrett, of Wilmington, Del.

POWELL—SHUMAN.—October 11th, 1882, at the residence of the bride's parents, by Rev. Richard Searing, Wm. R. Powell, M.D., of New York, and Miss Mary Shuman, of Columbia, Pa.

SAURMAN—SHELLEY.—On October 3d, by Rev. Mr. DeMoyer, assisted by Rev. Mr. Stewart, Dr. B. F. Saurman, of Boston, Mass., formerly of Norristown, and Miss Leonora M. Shelley, of Ashland, Pa.

DEATHS.

COXE.—At Baltimore, Md., on Friday, Oct. 13th, Ernest Cleveland Coxe, M.D., aged 32 years.

HOWELL.—In this city, on the 10th instant, Benjamin P. Howell, M.D., in the seventy-fourth year of his age.